University of Alberta

STRATEGIC CHANGE IN HIGHER EDUCATION:

A CRITICAL REALIST ANALYSIS

by

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Abstract

This dissertation contributes to the literature on strategic change in higher education by examining the meso-level social structures and cultural system components and their mechanisms as they were activated during a strategic curriculum modularization initiative at a college in Alberta, Canada. The question guiding the study is: How does the interplay between departmental contexts, organizational structures, and cultures affect the implementation of a strategic change initiative?

The study examines the unique causal configurations comprising the contextual elements and the structural and cultural mechanisms that led to differing agential engagement and subsequent outcomes amongst three departments at the college. In addition, the study explores the temporal nature of the interaction of the structural and cultural powers and mechanisms throughout the three-year implementation timeline.

The data were collected through semi-structured, open-ended interviews with departmental leaders followed by a reflective writing exercise, a validation questionnaire, and a focus group. The data were analyzed using an adaptation of the "context, mechanism, outcome" framework of Ray Pawson and Nick Tilley and using the notions of cultural components and social structures acting and interacting over time, inspired by the work of Margaret Archer.

The data reveal that each department had a complex and unique causal configuration. The social structural powers and cultural system powers operated through mechanisms that manifested in particular ways in their interplay with each other. The "mini" cases of each of the three departments contrast sharply and resulted in widely differing outcomes of high, moderate, and low engagement with the strategic change activity of modularization and digitization of college curriculum.

The data support the growing evidence that organizational change initiatives need to take into account the contextual elements of the collectivities involved in the change. In higher education, institutional change implementation strategies must be open and fluid to accommodate the specific nature of departmental structures and cultures. Implementation of strategic change

must take into account the structural and cultural causal configurations of departments and recognize that the flow of the change processes locally is complex. Top-down change strategies, targets, and timelines must be negotiated with departments and remain fluid to take into account the emergent nature of reality as organizational strategic change efforts proceed.

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CHAPTER I: OVERVIEW OF THE PROBLEM

Introduction

Change in organizations is a major theme of organizational studies. Researchers have investigated the nature of organizational change, the barriers and catalysts to change, and implementation strategies. Researchers and practitioners have made recommendations regarding how change should be "managed" as top-down strategic change is introduced into an organization.

Strategic organizational change is challenging. In any context, the various member groups of the institution or organization view change in vastly different ways because of a variety of factors such as past experience with strategic change. While prescriptions for managing successful change have been written, successful implementation for strategic change is highly problematic (Rhoades, 2000; Trader-Leigh, 2002). In fact, technology-related change initiatives in the United States had only a 16.2% rate of success in 1994 (Standish Group International) and more recent data show only a marginal improvement with a 30% success rate in 2001 (Standish Group International).

Based on several large-scale change evaluation studies and his own personal engagement with several change projects, Michael Fullan, a leading Canadian researcher on educational change, noted (1994) that "neither top-down nor bottom-up strategies for educational reform work" (¶1). His conclusion was that a more intricate and multi-faceted approach is required. Margaret Wheatley, the author of *Leadership and the New Science* (1992)—a breakthrough book about the nature of organizations based on systems theory—is reported to have commented, "I noticed that if we had an organizational change effort that was successful, it felt like a miracle to us" (London, 1996, ¶5). Further, change in "professional bureaucracies such as... universities in which highly trained and autonomous professionals, rather than administrators, largely control the core processes" (Zell, 2003, p. 73) is highly challenging as the

professionals involved often question the wisdom of the upper management in launching a strategic change initiative.

I was personally involved in several strategic change initiatives in various roles in higher education and gained an avid curiosity about how to lead people successfully through a strategic organizational change. I became familiar with the popular literature on leading change and, when given the opportunity, was excited to be involved in a major strategic change initiative at Leading Edge College—the site of this research study. Despite valiant efforts on the part of change leaders, the envisioned change was not adopted consistently across the breadth of the college. Some departments became highly engaged with the change; others overtly or passively resisted; still others satisficed the change goals with minimal compliance. As a result of this experience, I became motivated to understand the mechanisms that cause individuals in departments to engage with strategic change so as to produce quite different outcomes. I wanted to understand what factors—structural, cultural, agential—influenced engagement with change. The research I subsequently engaged in is reported in this dissertation.

Purpose of the Study

As a change agent for Leading Edge College (LEC), I witnessed a very uneven participation in strategic change efforts. As a result, my purpose for this study was to explore and understand the interplay between the broad socio-political context, the structures of the college and departments, the culture of the individual departments, and the agency of the departmental groups involved in a strategic change initiative. It involved analysing the structures of the institution and departments and how these were activated by departmental members. The analysis focused on understanding how the emergent properties of the activated structures interacted with the cultural components of the departments and how those interactions played out as a result of the strategic change initiative. The analysis is grounded in realist ontology using the work of Pawson and Archer as the theoretical frameworks. Hedstrom and Swedberg's (1998) typology of social mechanisms and Hedstrom's (2005) "Desires, Beliefs, Opportunities" (DBO) theory support the discussion of the findings. Through analysis of the individual cultures of the

departments in the study, this research highlights the differing effects the same structures can have in the decisions made by actors in different cultures. Understanding how departmental logics affected actors' motivation to act—either in engagement with the change initiative or in compliance or resistance—are key to this study. This research explores the phenomenon of engagement with strategic change and the impact of structure and agency on engagement of agents with change. Looking at structure, culture, and agency as they relate to change in a higher education institution is in alignment with Kezar's conclusion that "organizational change can best be explained through political, social-cognition, and cultural models" (2001, p. vii). Using both Archer's morphogenetic approach (1995, 1996) and Pawson's "context, mechanism, outcome" model, an understanding of strategic change is facilitated through the examination of the relationships amongst the mechanisms in the social and cultural realms. Additionally, Hedstrom and Swedberg's (1998) typology of mechanisms and Hedstrom's Desires, Beliefs, Outcomes (DBO) theory facilitate explanation of the causal mechanisms operating in this study.

The Critical Realist Ontology

When I began this research, I knew that my basic stance towards the world was post-positivist in its assumptions. So I turned to postmodernism and explored how its premises fit with my view of the world. The highly relativistic, multiple realities of postmodernism seemed without an anchor in the real world as I know it. I knew that there had to be "theory that is better than what empiricism and post-modernism (had) to offer" (Moren & Blom, 2003, p. 43). As I read and learned, I realized that I subscribe to critical realist ontology. A full description of critical realism and Archer's morphogenetic social theory is included in Chapter II. However, here I will outline the basic premises of critical realist ontology as I understand them and applied them in this research.

1. A real world exists regardless of my awareness of it. In addition to the materially real made up of atoms and molecules, social and cultural practices are real as they affect behaviour.

2. Ideas, concepts, construals—my interpretation of the meaning of something—are real as they have an effect on how I choose to behave.
3. The real world can be analyzed; this is the subject of the sciences. The goal of science—the natural and social sciences—is to gain as close an understanding as possible of the real structure or mechanism that exists independent of human beings and the conditions which allow them to access the real. This is the intransitive dimension of science (Christofilis & Kousathana, 2005, p. 2).
4. "The transitive dimension is socially determined and changeable" (Danermark, Ekstrom, Jokobson, & Karlsson, 2002. p. 200). The transitive dimension of science refers to the social production of scientific knowledge based on antecedently existing knowledge from which new knowledge is formed. Transitivity represents the social character of science.
5. I, along with others, practice reflexivity—"the regular exercise of peoples' mental ability... to consider themselves in relation to their [social] contexts and vice versa" (Archer, in press).
6. Agency is essential to humanity. Humans pursue projects that are of importance to them; they have the will to act. It is the prioritising of my concerns and launching activities in the form of projects to address those concerns that gives me my personal identity (Archer, 2000).
7. Reality has "hierarchically ordered levels where a lower level creates the conditions for a higher level...Each level has its own emergent generative mechanisms" (Danermark, 2002, p. 57).

> We start from 'the bottom,' finding physical mechanisms in one stratum, chemical mechanisms in another, biological in a third, and 'at the top' are the psychological and social strata. When moving 'upwards' through these strata, we find that each new stratum is formed by powers and mechanisms of the underlying strata. At the same time, this new stratum represents something entirely new, unique and qualitatively different, which cannot be reduced to underlying strata. When the properties of underlying strata have been combined, qualitatively new objects have come into existence, each with its own specific structures, forces, powers and mechanisms. The start of this new and unique occurrence is called

> emergence, and it is thus possible to say that an object has 'emergent powers.' (Danermark, et al., 2002, p. 60)

8. Social situations, organizations, and systems are, by necessity, open and as such, phenomena have complex and interrelating causal mechanisms.
9. Any social situation, organization, or system has both structural (organizational) and cultural (ideational) domains. These are relatively autonomous from each other, but their effects and relationships to agency add to the complexity of the analysis of any given social situation.

At its foundation, critical realism offers a more nuanced approach to truth and reality than positivist approaches with a focus on explaining the world where the explanations are offered as a possible starting place for debate (Mutch, Delbridge, & Ventresca, 2006). Such an approach resonates for me.

Researcher's Context

At the time of the conception of this study, I was employed at LEC and my role was the Project Leader of the Modularization Project—an initiative with the goal of having the entire college curriculum organized into stand-alone "chunks" based on assessable outcomes. Prior to this role, I had worked at the college in the Organizational Development office facilitating training, managing and facilitating organizational interventions, and working with departmental groups on a variety of change projects in a variety of roles. Because of my previous research and experience, I was very familiar with the strategic change management literature. Additionally, I had taught at the college in various departments for over ten years, so I had an appreciation of the role of the faculty at the college. The combination of experience, knowledge, and positive reputation at the college led to the role of Project Leader of the Modularization Project.

As leader of this project, I supervised several curriculum consultants whose role was to work with the departments to accomplish the task of modularizing the curriculum of the college. I worked closely with Department Heads (DHs) as they led this work in their departments. At LEC, Department Heads are members of the faculty. This means that their major role is instruction while the management of departmental staff is a smaller part of their role. Therefore, DHs

engage with the change process on two levels: as faculty, but also as leaders of the change process for their department. I had a strong positive relationship with the DHs throughout the term of my leadership with the project, meeting with them regularly, providing them with progress reports, discussing challenges that they were experiencing, and soliciting advice regarding implementation of institute-wide processes. However, there were times when I would speak on behalf of the senior administration and press DHs to produce results.

I had a strong personal investment in the project, recognizing that my role would define my future career opportunities. I also saw the project as my opportunity to contribute to the learning of future students and the support of future instructors. My vision of a "successful" implementation was one where the majority of instructors at the college were willingly engaged in developing and sharing curriculum in a digital database. I am very aware of my personal investment in the case of strategic change in this study and how this investment strongly motivated me to understand the mechanisms at play in the departments that faculty experienced as barriers or catalysts to their engagement with the initiative. I am also aware that my role in the initiative influences my interpretations of the data.

I left the college to pursue other opportunities at the time of the writing of the proposal for this dissertation. Consequently, all of the research data were gathered with DHs when I no longer had any direct or indirect influence at the college. However, my close involvement with the college during the inception, planning, and implementation of the strategic change initiative allowed me to have greater insight into this case than would have been possible for a more disengaged researcher. I had an immediate understanding of many of the issues raised; I was able to grasp the historical references of participants as I shared their history.

However, my deep involvement in the research context also affects my ability to recognize nuances and pursue them. Because the participants expected me to understand their references, I may not have pursued them; or, when I did, the participants may not have explicated the reference as fully for me as they would for an outsider. A fuller explanation may have revealed undercurrents that I missed. Sharing cultural norms with the participants means that I

would tend to make sense of their comments within that norm without bringing new interpretations to bear.

I was very careful to give participants every opportunity to fully contribute their understandings to the research questions. I have worked hard to understand and interpret the data fairly and honor the voices of my participants in my analysis of their contributions. I have spent hundreds of hours with the interview transcripts, focus group transcripts and written responses, and other artifacts from the college such as policy documents, meeting agendas and minutes, and modularization progress reports. Critical realist "research has to be directed towards constructing—through deep knowledge of contexts—relevant objects of comparison" (Ekstrom, 1992, p. 117). By being deeply involved in the research context, I have a deep knowledge of the departmental contexts at LEC which helps me gain insight that may not be available to a researcher who was an "outsider."

Conceptual Framework

I have used an adaptation of Pawson's "context, mechanism, outcome" framework to create departmental causal configurations and Archer's morphogenetic approach for analysis of the change experienced by departments of Leading Edge College. The College consists of over one hundred programs organized into eight departments (Department of Health Programs, Department of Business Programs, etc.). However, the implementation of the strategic change was uneven across departments in the college; hence, I was interested in why actors within different departments became engaged (or not) with the strategic change initiative. Archer's work recognizes that culture is an overarching component with powers which can be activated by members of that culture, the morphogenetic approach provides a robust framework with which to tease out the various cultural mechanisms or institutional logics that were activated in the various departments in the study.

Additionally, Archer's morphogenetic approach is elegantly designed to use analogous analytical thinking to explore both the cultural system components and social structures. Her approach treats the processes by which cultural ideations affect change or stability in society in

the same manner as the processes by which social structures affect change. Thus the analysis of the responses of the various program representatives teases out the organizational socio-structures' powers and mechanisms and the cultural system components' powers and mechanisms that were activated in each of the departments in varying ways. The interaction of the relationships between culture and agency and structure and agency can be revealed at their intersection. Because of the interplay of the cultural system powers with the social structural powers, I adapted the "context, mechanism, outcome" framework of Pawson (1997) to distinguish between cultural system and social structural mechanisms to aid in the analysis of the data.

In the final chapter of this study, I use the typology of mechanisms developed by Hedstrom and Swedberg (1998) to structure a causal explanation for this case, and Hedstrom's (2005) Desires, Beliefs, Opportunities (DBO) theory to provide a viable description of the agency of actors in this study.

Definition of Terms

The following definitions are offered to facilitate the understanding of commonly used terms that are used in this study in a specific way. A glossary of general terms is also offered in Appendix E.

Causal Configurations are groupings of constituents operating in a particular setting that together create a Gestalt to explain the cause of a phenomenon.

Cause is a term to indicate that a thing is the producer of an effect. In this study, cause is often a reason or motive for some human action.

Causal refers to the influence of a particular constituent to produce an outcome. Outcomes are the result of clusters of constituents that together produce an outcome.

Constituent is used as a general term to encompass the parts that make up the causal configurations in this study. These are contextual elements, social structures and cultural system components.

Contextual Elements are the parts of the context that can be identified through analysis. Context is an amalgam of structural and cultural components and localized variables within which

agents act. The context appears to members as a given, although they may recognize that they have the power to change it through their actions.

Cultural System Components are the descriptions of the beliefs of a culture that make a claim to truth or falsity. The cultural system influences interactions amongst agents as each agent brings different beliefs to that interaction.

Mechanism is an explanation of the means by which an outcome is produced. In this study, the term mechanism is used to most often to describe agential reasons for actions. However, the term mechanism is also used in the literature and in this study to describe a series or constellation of reasons or processes that produce a result. Specifically, there are *structural* mechanisms in organizations that are institutionalized processes such as those for recruitment and reviewing performance. **Generative Mechanisms** are emergent from clusters of causal constituents that impact outcomes. Emergence refers to collective phenomena that are a result of the irreducible relationship between component parts. In the social world, an emergent phenomenon is collaboratively created by individuals, yet is not reducible to individual action (Sawyer, 2005). Emergence results in a "whole" that has properties or powers that are not possessed by its individual parts (Elder-Vass, 2005). These phenomena then become mechanisms for further action.

Social Structure is a description of the relationships amongst people. Some are formalized into roles and responsibilities, as in the workplace.

Unique is used in the study to describe constituents of a causal configuration that are limited in occurrence to the department in question and not occurring in the other departments in the case. If the constituent is occurring in more than one department, the nature of its character is different in each of the departments. The inclusion of unique constituents in a causal configuration results in a causal configuration that is unique to that department at that time.

Problem Statement and Research Questions

This study explores the multiple relationships between agency, structure, and culture and their effects on organizational change. Three departments with different cultures were selected

as "mini" cases within this study, to examine the effects of structure and culture as well as the actions undertaken by departmental members. The principal research question guiding the study was: How does the interplay between departmental contexts, organizational structures, and cultures affect the implementation of a strategic change initiative?

Specifically, the following questions were explored.

1. What is the nature of the departmental culture in each of the three cases studied?
2. Does an implementation strategy change during implementation? If so, what contextual elements or emergent structural or cultural powers might result in the implementation strategy to be altered?
3. How does the implementation strategy affect the perceptions of college faculty of the initiative within their departmental cultures? How do these perceptions differ amongst departmental cultures?
4. How do faculty perceptions of the strategic change implementation influence decisions to participate in the change initiative? How do faculty perceptions and actions change during the implementation of the strategic change and integration of the new structures—processes, procedures, rules, resources—into the departmental context?
5. How do leaders of change influence the level of engagement of other faculty in strategic organizational change?

The interview guide used in this study is included in Appendix A.

For the purposes of this study, a departmental context within which agents act is considered to be a complex amalgam of the organizational structure of the department, the departmental culture, and other localized variables such as the space that the department occupies. The organizational structures of departments at LEC are diagrammed in institutional organizational charts. These vary from a strongly hierarchical structure with clusters of individual instructors reporting to a senior instructor and senior instructors reporting to a department head to a strongly collegial structure with all members of a department being considered a member of the team reporting to the department head, or some variation of these two. Departmental culture is

characterized by the feeling that outsiders experience in interaction with the members of the culture. Cultural cognitions are propositions of that which is held to be true or false which are held with some degree of emotional investment (Archer, 1996; Sackmann, 1991).

Delimitation: The Technology

The case under study involved a top-down strategic initiative that had a technology component. Although this study could have focused on the technology and its effect on the engagement with the change initiative by the college membership, I have chosen not to foreground technology in my analysis as my interest is how individuals respond to top-down, strategic change whether technology is a component or not. Other studies have illustrated a tension between technology and cultures in higher education (Owen & Demb, 2004) and the analysis in this study recognizes this tension as the structural and social effects of the technology interact with institutional logics of departments (Orlikowski, 1994). I have treated the technology aspect as one component of the organizational structure of the college—it is indeed a resource provided to all faculty members. Additionally, there were rules about the use of the technology—who had access, how it could be used, the reports that could be generated, etc. These rules are also part of the organizational structure that had a role in this study. The effect of these rules will be considered as an organizational structure but will not be foregrounded over other organizational structures.

Although Mutch (2000) argued that "There is a need to acknowledge technology as a significant variable" (p. 159), this study does not focus on technology as such, but on the process of change. Technology was recognized simply as a structural/cultural constituent underlying the specific change process studied.

Assumptions and Limitations of the Study

It was assumed that participants would provide honest descriptions of their experiences with the strategic change initiative under study. It was assumed that the participants were reflexive in their consideration of their experiences and would openly share their understandings

and insights into engagement with strategic change. It was assumed that my former role at LEC as leader of the modularization project and my personal relationship with the individual participants did not affect their willingness to honestly share their experiences. Throughout the data gathering process, all of the interactions with participants felt open and collegial. At no time did I feel that participants were withholding or consciously characterizing their experiences untruthfully.

Strategic Change Assumptions

The challenge of top-down strategic change in higher education institutions is the need to address the question of the "rightness" of the strategic change with the members of the institution—does a change initiative address a real issue in an effective way? Top-down strategic change is often viewed by members of the organization as being forced on them without their input or permission and they often critically question the premises upon which the decision to initiate strategic change was based. The issues arising from the tension between the rights and responsibilities of administration to initiate strategic change and the rights and responsibilities of academics within the institution is beyond the scope of this dissertation. I recognize that this tension pervades the study. Because the calls for change in response to the external pressures of globalization, technology, increasing expectations, diminishing resources, and others are complex and pervasive, I assume that it is the responsibility of policy makers to address these issues systemically. In this dissertation, I make the assumption that the decision to implement a specific instance of strategic change has been done rigorously, with wisdom, and is based on moral purpose (Fullan, 1999).

Significance of the Study

Traditionally, organizational change researchers and writers have operated from assumptions based on the stability of organizations rather than that change is a natural and ongoing state for organizations. By viewing change from an agency-structure analytical dualism,

we can begin to understand the ongoing interplay between the relationships of agency, structure, and culture (Tsoukas & Chia, 2002).

Additionally, despite a prolonged focus on the need for change in organizations of all types, we do not yet have a clear understanding of why a strategic change or policy implementation does (or does not) become integrated into the target community (Grant, Wailes, Michelson, Brewer, & Hall, 2002, p. 237). The results of this research contribute another piece to the puzzle of the implementation of strategic change and why the change initiative does, or does not, become integrated and postulates a different approach to the implementation of change in contemporary organizations. This research contributes to understanding how to facilitate change in higher education institutions.

Archer (1996) postulates, "Social organization and cultural organization are analytically separable. Once this is done, it becomes possible to assert that discursive struggles are socially organized and that social struggles are culturally conditioned. Even more importantly, it becomes possible to specify which is more influential for the other, when, where and under what conditions" (p. 324). This study separates cultural and structural constituents in an organizational context, furthering our understanding of organizational change and the interplay of the constituent's powers and mechanisms.

This study's goal is to contribute to research on organizational change. This study seeks to enhance our understanding of causal powers and mechanisms that easily remain hidden with other forms of analysis. "Critical realism can provide a stratified view of reality with an ontological realist basis, and then allow us to move beyond actors' discourses, decipher between context and causal powers, and highlight hidden mechanisms" (Leca & Naccache, 2006, p. 645).

Chapter Summary and Organization of the Thesis

In this chapter, I have outlined the purpose of the research, discussed how my ontological assumptions are grounded in critical realism, and described the context in which I worked before and during the study. I also stated the problem and research questions the study explores. I provided a description of the delimiting of technology in this study, overviewed the

limitations, and identified the assumptions underlying the study. I concluded by arguing that the significance of the study to other researchers lies in the particular contributions the critical realist approach makes to our understanding of organizational change.

Chapter II reviews selected literature related to: 1) higher education organizational change and the effects of culture on such change; 2) critical realist ontology and related analytical frameworks; 3) institutional logics focusing on teaching and learning and managerial and marketing logics in higher education. Chapter III provides a description of the research methodology employed in the study. Chapter IV describes the case including a description of the external environment and college sector institutional field mechanisms that impacted the college.

Chapter V provides an overview of the thematic contextual elements, social structures, and cultural system components operating in this study and describes how their characters differed as exhibited through the emergent powers and mechanisms operationalized within each of the three departments. Chapter VI presents the unique causal configurations of each of the departments and provides a timeline of the activation of the contextual elements and social and cultural mechanisms.

Chapter VII discusses the most significant findings that address the research questions of this study. The chapter includes a causal explanation of the case and discusses implications of the finding for change agents or leaders of change. The methodological and substantive contributions of this study are outlined and further research is identified.

CHAPTER II: LITERATURE REVIEW

Introduction

This study has as its focus understanding the interplay of the powers and mechanisms of social structures and cultural components on organizational change. The site of the case is a postsecondary institution, so the literature reviewed includes literature on organizational change and leading change largely within the context of higher education. Because the approach taken is based on the ontology of critical realism, I first discuss this approach and then review some of the literature on the work of Margaret Archer. I focus on her view of culture and agency as well as her social theory known as the morphogenetic approach. Additionally, I address other works related to analysis based on critical realism including the social mechanisms analytical approach of Peter Hedstrom and the Context, Mechanism, Outcome (CMO) analytical framework of Ray Pawson and Nick Tilley—the framework adapted for use in this study.

Higher Education and Organizational Change

Higher education institutions are unique structures consisting of loosely-coupled departments that share a complex bureaucratic structure. Academic departments operate in very competitive and contested environments fraught with competing policies and priorities. "The overall picture is of academic institutions made up of basic organizational units whose constituent faculty members have relatively little mutuality of... interests" (Becher & Trowler, 2001, p.197). Studying processes of change in these very complex organizations provides a unique challenge.

The change model used in the modularization initiative in this study was a strategic planning model which is a teleological or technical change model. Teleology is a philosophy based on the belief in or the perception of purposeful development toward an end. Teleological change models include strategic planning, bureaucratic and scientific management, and organizational development strategies. These models are rational and sequential and are attractive to change leaders as they promise influence and control of organizational change.

Teleological models emphasize that change is linear and implemented in steps—developing a vision, communicating the vision, providing resources, etc.—while not attending to the interrelationship of strategies and the contingent, organic nature of change (Kezar & Eckel, 2002b).

Blenkin, Edwards, and Kelly (1997) have described six perspectives for studying change, each of which has differing assumptions about the nature of change, higher education institutions as structures, and human agency. The six perspectives are the technological, cultural, micropolitical, biographical, structural, and sociohistorical. Blenkin et al. suggest that each of these perspectives can be used as a lens to foreground particular factors or processes in change engagement depending on whether one is interested in change from a process or an individual level perspective. The limitation of this approach is that it is difficult to gain a sense of the whole picture. The morphogenetic approach used in this study applied to a unique institutional setting combines Blenkin, Edwards, and Kelly's human agency, cultural, structural, and socio-historical perspectives into a more inclusive analytical framework which allows the researcher to gain a greater understanding of the interplay of these factors and processes. The morphogenetic approach will be outlined fully later in this review.

As early as 1947, Lewin constructed a model of change using a metaphor from the physical sciences; change consists of "unfreezing," engaging in change, and "refreezing" (Morgan, 1998; Weick & Quinn, 1999). This model of change is shared by change and transition models from diverse disciplines (Elrod & Tippett, 2002), is echoed by others (Birnbaum, 2000; Curry, 1991; Greenwood, Suddaby, & Hinings, 2002; Hall & Hord, 2001), and is compatible with the morphogenetic approach.

Kezar's (2001) review of selected research on the process of organizational change in institutions of higher education used a typology of six models to organize the research: evolutionary, teleological, life cycle or developmental, dialectical or political, social cognition or learning, and cultural. The evidence of her review suggested that change is best explained through cultural, political, and learning models. However, she also concludes that combined models of change may be best suited to the unique characteristics of higher education institutions

that have both professional and administrative functions and cultures. The two combined models of change that she features are Robert Birnbaum's (1991) cybernetic approach and Lueddeke's (1999) constructivist approach.

Birnbaum's cybernetic approach is a systems model approach in which the bureaucratic structures, collegial or academic cultures, and political and power systems all operate simultaneously. Leaders of change are advised to examine change from various perspectives and, through the use of feedback loops that monitor the change implementation, make adjustments in change strategies in response to the feedback. Assessment is a key role of the change leader. The change leader responds to assessments (feedback) by identifying problems, diagnosing mechanisms that enable and support the problem, and implementing an intervention of countering mechanisms to ensure the organization continues to operate effectively.

Lueddeke's (1999) Adaptive-Generative Development Model (AGDM) is grounded in a constructivist tradition with an emphasis on shared governance and participatory leadership. Underpinning the model is the concept of organizational learning that is both adaptive—learning that allows the organization to survive environmental change—and generative. Generative learning is "learning that increases the institution's or individual's capacity to create new solutions to increasingly complex problems" (Lueddeke, 1999, p. 240). Within institutions such as LEC, adaptive change is focused on adapting existing practices to address calls for strategic change. Generative learning requires thinking systemically and seeking to understand underlying mechanisms of change. Generative learning supports change that is transformative in nature that builds capacity in individuals and the collegial structures and cultures to address the turbulent and unpredictable challenges of globalization, technology, increasing expectations, and diminishing resources.

Lueddeke's model has six components that are sequentially and rationally oriented to prescribe a model for change in higher education. These elements are: 1) needs analysis; 2) research and development; 3) strategy formation and development; 4) resource support; 5) implementation and dissemination; and 6) evaluation. One strength of Lueddeke's model is its emphasis on learning and engagement in strategic innovation that is evidence-based rather than

ad hoc. Second, the emphasis on the examination of change through many frames or lenses leads to multidimensional or systemic thinking.

In his description of criteria for a realistic framework or model for change, Lueddeke describes elements that the model would need to encompass. These include: 1) integration of experiential learning including reflection and reconceptualization; 2) collegial and collaborative decision-making; 3) capacity to adapt existing practice where appropriate; 4) capacity development for generative, organic, and recursive approaches to change; 5) ensuring credibility of change efforts with the academic community of the college; 6) building a culture and capacity to function in ambivalent and chaotic environments; and 7) provision of verification and feedback loops through evaluation and action research.

Lueddeke's criteria for a realistic model for change are helpful and support the challenges of change leaders at all levels of the college hierarchy. However, his example of the AGD model in use for the development of institutional guidelines for effective teaching and learning emphasized the policy development aspect of strategic change and described limited implementation of the change in departments. In his example, the implementation strategy was limited to solicitation of feedback on the document before proceeding to the final stages of policy ratification. This example leaves issues of effectiveness of *implementation* of teaching and learning practices to individual departments without support to exist in addressing structural or cultural mechanisms that may be in opposition to the policy.

Leading Change

Lueddeke's model for change incorporates elements that require a collaborative, constructivist leadership style. In addition to William Tierney, whose work I will discuss in a subsequent section, the work of Ronald Heifetz provides insight into leading change.

Ronald Heifetz teaches at Harvard University's John F. Kennedy School of Government. Ten years of interaction with practitioner students allowed Heifetz to develop, test, and refine a set of ideas about leadership which he explicates in his book *Leadership Without Easy Answers*

(1994). He recognizes that leaders operate in highly complex systems and that often change is simple adaptation of current processes to accommodate new circumstances.

Lueddeke, delineates two kinds of learning in his model—adaptive and generative. Heifetz similarly recognizes that the problems confronting leaders fall into two categories—the relatively simple technical problems are those for which we have answers—ones that require adaptive learning—and more complex challenges that require generative learning. Complex challenges are messy and painful, requiring people to change their values, their behavior, and their attitudes and learn new ways of doing things. Heifetz believes that leadership can come from all levels of an organization. Authority, on the other hand, is a characteristic endowed upon managers that increases as one moves up the hierarchy of an organization.

Leaders with authority are restrained from performing generative leadership functions by the expectation of their followers that they will control conflict—protect the individuals that report to them from confusion and conflict. In addition to other restraints departmental leaders experience in post-secondary institutions, the expectation that department heads will protect their departmental faculty from conflict and disruption reduces their ability to engage their departmental members with problems that require generative learning. Heifetz agrees with Lueddeke, that the effective solution of problems through generative learning involves conflict and confusion. It is the effective engagement with these difficult problems that brings about meaningful change.

Heifetz posits that leadership is an activity that engages communities with well-structured questions, rather than offering definitive answers, and challenging the organization to work through its issues to take advantage of opportunities. Leadership is facilitating generative learning which often brings with it confusion as a normal, expected component of the problem-solving process. Heifetz encourages leaders to use perspective to determine the appropriate action. Heifetz speaks of the need for leaders to "get on the balcony" and to look down at the activity occurring in their organization to gain detached understanding of the pattern(s) of the change in the midst of process of change.

Departmental Leadership and Change

There is a substantial body of literature on departmental leadership of change. In this study, I selected informants that are departmental leaders who were tasked with implementing a strategic change initiative. The reason for selecting departmental leaders was that they occupy a unique space in the organizational hierarchy and would therefore be able to provide insights that otherwise would not be available (Murray & Murray, 1996; Edwards, 2006). Departmental leaders at LEC are tasked with implementing decisions to which they have had little or no input. They are the communication channel—often interpreting the decisions of senior administration for faculty. They supervise faculty and are tasked with ensuring that faculty fulfill all required job functions while they too fulfill a faculty role. LEC department heads belong to the same faculty association as the instructors that they supervise, resulting in professional tensions when faculty members are asked to fulfill a senior management mandate. Because of this study's focus, this review of the change leadership literature focuses on the unique role of departmental leaders with limited reference to the substantial body of literature about leading change.

"Mid-level managers [department chairs] in the... college are often burdened with tensions resulting from their dual roles as administrators and faculty members" (Yamasaki, 1999, p. 67). The duality of their roles is due to structural and cultural mechanisms operating within the institutions. Managers experience the pressure of their divided loyalties when implementing strategic change that is resisted by faculty—of which they are a part (Mutch, 1998; Trowler, 2001). As well, departmental managers are often facilitators of learning of the faculty in their department and, as such, help to facilitate "cognitive shifts" (Isabella, 1990, p. 9) of faculty during departmental change efforts. Julius, Baldridge, and Pfeffer noted in their 1999 study of Canadian academic leaders that the willingness to influence others was a determinant of administrative effectiveness in making change occur. Often, mid-level managers feel powerless to implement the multiple and often competing priorities demanded of them and are caught between the demands of their superiors and their dependence on their departmental faculty to carry out the directive (Julius, Baldridge, & Pfeffer, 1999). Additionally, ineffective departmental leadership has

been characterized as one of the major barriers to organizational change (Hoag, Ritschard, & Cooper, 2002).

According to Weick (1995, 2001), sense-making in institutions appears to occur at the level of the department which may relate to the "communication conduit" function of the program head. Managers interpret information (Mutch, 1998) that is being presented through them from upper management to the population of the organization. Goodrick's and Salancik's analysis of medical services shows that the

> institutional framework within which choices are made constrains managers to act in ways that make sense and are appropriate within that framework...Managers, like other actors, must rationalize their actions within some institutional framework. Such frameworks not only give a basis to the actor making decisions, but also provide a basis for the involvement of those who must participate in implementing the decision—their academic staff. (1996, p. 18)

Levin (1998) found that sensemaking of organizational change varied by group—administration, faculty, union members, change agents, etc. Members of the colleges he studied told stories of management interpreting external environments and choosing actions designed to fulfill organizational goals. Gleeson and Shain (1999) in their study of the implementation of managerialism into further education programs in Britain found that a crucial role of middle managers was mediating change.

Bushher (1999), in his reading of the literature, cites Glover as determining that dimensions of departmental leadership include translating what they understand to be the perspectives and policies of senior administration, encouraging faculty to incorporate these into classroom practice, and developing a collective identity amongst faculty. Weick (1995) refers to this as "loose coupling"—a term from systems literature that is used to describe the semi-autonomous nature of departments that are left to their own devices and as such develop their own processes, identities, and cultures. This semi-autonomous nature of departments can result in a gap between the desired and actual outcomes of a strategic change initiative.

As well, Bushher (supported by Fullan, 2001) identifies the key role that department heads make as a communication portal between the department and the rest of the college. As

communication and strategic policy "translators" (McArthur, 2002; Montez, Wolverton, & Gmelch, 2003), the department heads are key players in the construction of a departmental change reality.

> The very fact that departments vary in size, configuration, status, resource power, and staff expertise makes the job of each head of department contextually different from that experienced by other heads of department either within the same school, or in other schools. (Bushher, 1999)

Contexts vary (Stark, Briggs, & Rowland-Poplawski, 2002); webs of influence vary; communication patterns vary; cultures vary (Becher & Trowler, 2001); constructed realities vary; thus departmental discourse varies.

There are indications that departmental leaders are often inadequately prepared for their role in helping others to engage with change (Brown, Martinez, & Daniel, 2002; Hilosky & Watwood, 1997; Hoff, 1999, Jones & Holdaway, 1995; Smith & Stewart, 1999; Spangler, 1999) and are unlikely to pursue professional development after they begin their job as leader (Stark, 2002). Additionally, they often do not receive appropriate feedback about their performance—most importantly departmental faculty's perception of the department head's performance—so that they can engage in reflexivity (Archer, in press) and make self-corrections (Heck, Johnsrud, & Rosser, 2000).

Alvesson and Sveningsson in their study of managers in an international knowledge-intensive research and development company found that managers "incoherently move between different positions on leadership" (2003a, p. 961) indicating that we do not yet clearly understand the experience of managers called to be leaders, yet tasked with managerial and administrative duties.

Confusion on the part of departmental leaders about the nature of leadership needs to be addressed through the recognition of multiple definitions and beliefs about leadership (Calabrese & Shoho, 2000). Descriptions of characteristics of leadership often emphasize the characteristics of the charismatic, transformative leader who inspires followers to engage in self-sacrifice and high levels of performance (Pielstick, 1998). Definitions of leadership are evolving in higher education (Eddy & VanDerLinden, 2006) to include leadership throughout the organization rather than strictly positional. Forms of leadership such as team leadership or servant leadership that places less emphasis on the classic "hero" leader are becoming more prevalent in the college

sector. Many colleges are now moving to participative decision-making and leadership models to become more inclusive of college stakeholders in the leadership process (Kezar, 1998). In participative leadership, multiple ways of understanding leadership must be recognized not only because of the diversity of institutional members but also because such diversity strengthens a college's ability to adapt and meet the dynamic challenges of higher education's current context.

In the next section, I review selected literature on organizational culture and change.

Organizational Culture and Change

Interwoven with the literature on leadership is a body of literature that incorporates the concept of culture in order to examine leadership, change or innovation, and organizational context (McPhail, 2002; Tierney, 1989, 1992, 1997, 1999). The form of institutional change examined in this research is strategic change—that is change that is broad in scope, initiated at the "top," and uses the techno-rational strategies of strategic planning (Hord, 1992).

William Tierney has written a great deal about institutional change and leadership in the higher education context with reference to culture (Tierney, 1989, 1997, 1999). Tierney's research in four-year colleges and universities in the American system uses the concept of culture to better understand the processes, systems, and relationships in the institution. Consideration of organizational culture helps institutions create appropriate policies that contribute to the successful socialization of new faculty into their programs and institutions. Tierney's research also shows how the introduction of new faculty re-creates the existing culture of the academy (Tierney, 1997).

Tierney (1989) makes the link between culture and individual construction of reality as he notes in attempts to understand organizational culture that "culture is an act of interpretation, what each person observes and interprets varies" (p. 76). That is, individuals focus on different components of reality in any given interaction and then interpret what they perceive through their own sets of beliefs, values, experiences, and perspectives to make sense of what they have observed. The individual reveals to the researcher his or her view of institutional or departmental

culture which is again reinterpreted by the researcher. As such, any understanding of culture is a dialectical process of negotiated meaning between the researcher and the informant.

In his study of curricular reform at two American colleges, Tierney (1989) foregrounded curriculum—what counts for knowledge—as a focus of a cultural clash between groups of faculty who come from different subcultures within a single institution. He concludes that, within an institution, departmental cultural differences should not be ameliorated or ignored but rather confronted to create understanding. As such, leadership is the facilitation of dialogue amongst the college members to promote understanding of the values and goals of the college and support the diversity that is inherent in the institution as collectivities of individuals (1992).

Becher and Trowler (2001) further attribute cultural differences to academic disciplines which are commonly associated with departments. They argue that the way that faculty engage with their subject matter and the social practices, attitudes, and values of that engagement contribute to the culture of the department. Additionally, different disciplines attract different personality types (Kolb, 1981; Myers, 1993; Myers & Myers, 1995), and the collectivity of these individuals also contributes to departmental culture. As individual members come and go, the culture is re-created (Tierney, 1997), but the cultural components stemming from the academic discipline provide coherence and stability to the department.

Kezar and Eckel conducted an analysis of comprehensive change in higher education institutions (2002a, 2002b) to determine if there were strategies that were core to facilitating transformative change. Five core strategies were found: senior administration support; collaborative and distributed leadership; a robust and flexible implementation plan; numerous opportunities for staff development; and visible action including feedback on results. Further analysis determined that strategies were best selected based on the culture of the institution undergoing strategic change (2002a). Their research showed that different institutional cultures responded differently to change strategies and that the strategies should be carefully selected to align with organizational culture for the best potential success of the strategic change.

Kezar and Eckel further determined that what made the five strategies core to transformative change was the facilitation of opportunities for staff to make sense of the changes

that were occurring from individuals making meaning through staff development to campus-wide sensemaking through campus retreats (2002b). The opportunity for dialogue and engagement was a "superordinate" strategy. The need for institutional members to engage in dialogue and sensemaking is embedded in Lueddeke's AGD model of change and Tierney and Heifetz's leadership frameworks.

A further layer to the organizational culture (or context) is the layer of intersecting webs of power and influence (Coopey, 1996; Wallace & Hall, 1994). The web of influence is foregrounded when we examine organizations from a micropolitical perspective (Marshall & Scribner, 1991). As people compete for valued things—resources, space, prestige—influence and application of power will result in the activities of individuals. Individuals use power through activation of structural and cultural mechanisms to achieve their aims (Fairclough, 2005; Archer, 1995, 1996). Phillips and Brown (1993) used a method of "critical hermeneutics" to analyze text to examine the influence of power on culture through communication. They have illustrated the relationship between culture and power: "by carefully managing communication, and therefore the process of cultural production, powerful individuals and groups can legitimate their positions and institute a form of social control that removes the need to exercise control directly" (¶13).

When change is implemented, the ambiguity of the outcomes of the change process provides opportunity for shifts in power (Levin, 1998; Lindle, 1999; Poole, 2001). Power is not "static and possessed, but circulates within and between us" (Inglis, 1997, ¶ 2). Power is mediated by the interrelations between the various structures activated in a particular context. Change creates opportunity for groups and individuals to advance their agendas. When actors, individually or in groups, choose to honour or marginalize new information about teaching and learning, they are acting politically (Corbett, 1991; Sissel, 2001). West (1999) exhorts leaders to be aware of micropolitical activity and to use this awareness to enhance their effectiveness as leaders.

Weis (1985) in her study of a black urban community college concluded that the activities and interests of both faculty and students created the culture of the college that led to unintended institutional outcomes. Rhoades and Slaughter's (1991) study of the negotiation of policy on

technology transfer is an example of the contested terrain of organizational change as groups use different myths to support arguments for their position. The researchers conclude that further examination of the contested terrain of professional work is required. This conclusion is supported by other studies of organizations whose constituents are professionals; "in professional bureaucracies, change in organizational core processes occurs only when professionals themselves agree to undergo change" (Zell, 2003, p. 74).

The study of the implementation of technology in educational institutions and other professional organizations has found that change associated with technology is entangled in power relations (Constantinidies & Barrett, 2006). Additionally, the study of technology and change brings new problems and issues forward for study as the introduction of information and communication technologies into higher education often involves intentionally broad sweeping change that triggers other, often unanticipated, change (Barrett, Grant & Wailes, 2006). Technology has a material existence (computers and networks) as well as a social existence made up of the understanding and usage of the technology in the work of individuals in the organization. Implementation of technology as a strategic, top-down change has often ignored the "social and cultural understandings about the organization of work" (Bridgman & Willmott, 2006, p. 113). Indeed, there is an increasing call to researchers to focus on both the structural and social characteristics surrounding technology as it is implemented into complex and diverse organizations and the resultant effect on the change process (Orlikowski, 1992; Orlikowski & Yates, 2006; Schultze & Orlikowski, 2004; Wagner & Newell, 2006).

Summary

The literature on change and leading change is vast, and in the preceding section of this literature review, I focused on components of the literature that were useful to this study.

The change in higher education literature furthered my understanding of the nature of the departmental structure in higher education institutions as loosely coupled collectivities with specific identities and cultures. This knowledge led me to select departments with widely varying identities to broaden understanding of change in the diverse cultures of the institution in this

study. The work of previous researchers to categorize change models based on assumptions of change provided me with an understanding of the need to dig deeply into the ontology underpinning this study and to leverage the power of critical realism to provide new insights into the change process.

Kezar's (2001) identification of combination models as facilitating the study of change in higher education resonates with my experience. These combination models share a systemic view of change with feedback loops that support learning and evidence-based decision-making. The cybernetic model (Birnbaum, 1991) emphasizes adaptability and flexibility in the change process—a key feature of the strategic change in this study. Lueddeke's (1999) Adaptive-Generative Development model is based on key elements that are a very helpful set of guiding principles for any change model in higher education. Although Lueddeke's example of the AGD model in use did not illustrate the challenges of departmental implementation, his work informs the implications of this study.

In alignment with the key elements of Lueddeke's AGD model, the following section focuses on Heifetz's (1994) work on leading change. His work led me to the insight that some managerial mechanisms counteract the mechanisms for leading change, a key example of which is the departmental members' expectation that department heads will control conflict. Yet this study illustrates that change that addresses complex issues has conflict, confusion, and tensions at its core.

Departmental leaders have many conflicting mechanisms at play inherent in their dual role as managers and faculty. The literature about departmental leaders and change was selected to inform the study regarding the ambiguous nature of the role of departmental managers. Departmental leaders reside at the interface between organizational bureaucracy and professional collegiality and are expected to lead the implementation of top-down strategic change in their departments. This is a challenge as department heads struggle with role ambiguity and competing definitions and assumptions about the nature of leadership (Paradis, 2007). This review clarifies that departmental leaders often lack clear understanding of the nature of leadership and the interplay of mechanisms of strategic change. As participative leadership

models are incorporated into college structures, departmental leaders need knowledge and skills to effectively facilitate change, including an understanding of the relationship between organizational culture and change. This literature gave me an understanding of the challenges of the participants in this study and sensitized me to the mechanisms that may be at work in the study.

Tierney's (1989, 1997, 1999) work on the effects of institutional culture on organization-wide change calls for efforts to confront cultural mechanisms to create understanding and conceptualizes the role of leadership as leading the conversations amongst college members for that purpose. Becher and Trowler (2001) highlight the strong departmental cultures in higher education institutions and their research indicates that such cultures are related to discipline-specific values and attitudes. This insight led me to investigate departmental members' previous career experience as a potential mechanism in this study.

Kezar and Eckel's (2002*a*, 2002b) study found that change strategies are most effective when culture is considered, and that sensemaking is a pervasive strategy for leading change. This finding is congruent with the findings of Heifetz (1994) and Tierney (1999). These findings helped shape the discussion in Chapter VII of this study. The literature on the effects of power in organizational change sensitized me to issues of power in LEC. Technology is recognized as having powerful effects on change implementations. Although technology is not foregrounded in this study, the literature on technology and strategic change facilitated identification of mechanisms related to the software application used in this study's change initiative.

The literature on organizational change is broad and far-reaching. Many ontologies, frameworks, lenses, and metaphors have been used to examine change in the effort to better understand the processes and influencers of organizational change. These studies originate in various ontologies and, although they are helpful in beginning to understand the effect of culture on organizational change, they do not examine in depth the interplay between and among culture, structure, and agency. Scholars have noted this challenge (Archer, 1995, 1996a, 1996b; Domingues, 2000; Fuchs, 2001; Hays, 1994; Willmott, 1999) and, later in this review, I will outline Archer's analytical framework—the morphogenetic approach—and the Context, Mechanism,

Outcome model of Pawson and Tilley. These are used in this study to tease out further understandings about institutional change. These writers' works are grounded in critical realist ontology which is the focus of the next section of this literature review.

Critical Realism

Realist ontology claims that there is a real world—including the social world—that exists independently of our awareness or knowledge of it. The critical realist ontology is a version of realism that has been articulated by several philosophers but most prevalently by Roy Bhaskar. In his 1989 text *Reclaiming Reality*, Bhaskar proposes an analysis of philosophy and science that results in a concept of realism that has been called "transcendental realism" as it applies to the natural sciences and "critical naturalism" as it applies to the social sciences. His goal is to "construct an account which preserved the scientific method whilst recognizing the limitations of positivism" (Mutch, 2000, p. 156). Bhaskar used the term "transcendental" signifying his philosophy's transcendence of the empirical domain and the positivism that pervades the natural sciences.

Bhaskar uses the term "critical" when applying realism to the social sciences because the common philosophy of realism is "critical" of the then social sciences common error of privileging structure or agency: either reducing all sociological explanation to the characteristics of the individual or rendering the individual powerless to the collective culture or societal structure.

Subsequent to the writing of *Reclaiming Reality*, Bhaskar's ontology of critical realism has been expanded and applied to many areas of study including organizational studies. The critical realist ontology gives social researchers the basis upon which to build the tools to deeply understand social phenomena.

Critical realism fundamentally acknowledges a world that exists regardless of the limits of our perception. Our world has molecules that organize themselves into objects without our awareness and certainly existed before we had ever even conceived of a molecule. However, that which is "real" is not limited to the physical world; rather, "something is real if it has an effect or makes a difference" (Fleetwood, 2004, p. 29).

Ideas, rhetoric, and reasons are all real as they all have an effect or make a difference. In this way, people's understandings and interpretations—constructions of reality—are real, as they have an effect. Thus, what a person believes about material objects or observed events—the associated values, the usefulness, the meaning, the discourse—is a product of the person's construction and is real. These beliefs are constructed by individuals through internal conversation commonly called "thinking," through reflexivity, and through external conversation with their social field. There is no understanding of the world without mediation through the human senses and the concepts that we have to interpret and understand reality (Fleetwood, 2004, 2005). In this study, participants' perceptions and beliefs about the strategic change initiative were mediated through their constructs of change and leadership.

Critical realism postulates four modes of reality. First, there is the materially real which consists of the things of nature—mountains, lakes, weather, etc.—which "exist independently of what individuals or communities do, say or think" (Fleetwood, 2005, p. 199). Second, there are entities that are ideally real—conceptual entities of ideas, beliefs, meanings, explanations, opinions, and so on. These discursive entities have effects; they are real. Third, social practices and social structures are socially real. They have no materiality and are reproduced or changed based on human activity (Fleetwood, 2004). The social world is a constructed world (Berger & Luckman, 1967), but, through its construction, becomes independent from the individuals and groups who constructed it. Such constructed social institutions subsequently have independent effects on the behaviour of individuals and groups (Ackroyd 2004). Social structures have a reality *separate from* any theory or explanation of the social structure. This concept of "real" has great implications for research because social structures, cultural components, and human agency have causal powers and a researcher's task is to explore their interactions (Archer, Sharp, Stones, & Woodiwiss, 1999). Finally, the artefactually real mode circumscribes man-made items that are a "synthesis of the physically, ideally and materially real" (Fleetwood, 2005, p. 201). Critical realism recognizes that such material entities are conceptually mediated by individuals. A computer can be considered to be a powerful tool for collecting and analyzing data or a great game-playing device depending on the individual's concept of a computer. Critical

realists accept that there are limits to interpretation and some interpretations are better than others (Tezcan, 2006, p.4). For example, either of the above descriptions of a computer is better than that of a computer as a decorative piece for an office!

Reality is multi-layered with each domain building on the foundation of the one below. Roy Bhaskar (1998) adheres to three domains of reality: the real, the actual, and the empirical. The empirical domain is the domain of our experiences, both direct and indirect. In the actual domain, events happen whether individuals experience them or not (Moren & Blom, 2003), and the real domain consists of the forces and causal powers that, through mechanisms, produce events in the world.

Critical realism recognizes that social systems are open and causation can be due to multiple mechanisms that are contingent on specific contexts (Archer et al., 1999). Social situations can never be closed systems with controlled variables. This has implications for social realists in that

> given the impossibility of artificially creating closed systems, the human sciences must confront the problem of the direct scientific study of phenomena that only ever manifest themselves in open systems...it follows from this condition that criteria for the rational appraisal and development of theories in the social sciences, which are denied (in principle) decisive test situations, cannot be predictive and so must be exclusively explanatory (Bhaskar, 1998 p. 22-23)

As such, the intention of a critical realist researcher is to explain, not to predict (Nash 2005).

Critical realists recognize the temporal nature of the production and reproduction of structures and the dependence on agents to enact the structures. Societal activation—the production and reproduction of structures—is continuous and is a direct result of the activity of people; however, for the purpose of understanding the intersection of structures and agents, critical realists recognize that at any given point in time, there exist structures emergent from human activity that has gone before. When I accept employment with an institution, I enter into a set of structures not of my own making. I am constrained or enabled by them. However, over time, as I interact with the structures, my actions may reproduce the structures or change them resulting in new structures that a new employee of the institution will encounter (Fleetwood, 2005).

Additionally, entities, including structures and agents, have powers, capacity and potential to do certain things but not others. Some of these powers come because of a structure—an individual's position in an organization, for example; others, such as skills or competencies, may be resident in the individual. One of the distinctive features of critical realism is that it attributes different causal powers to structure, culture, and agents and, at the same time, recognizes their interdependence (Archer, 2000). Emergent powers interact and can be additive to provide a context with seemingly insurmountable barriers or complete support for certain activities; alternatively, powers can operate in opposition and effectively neutralize each other (Fairclough, 2005). All of these forms of interaction were uncovered in this study. For example, some departments in this study centralized curriculum components, and the power of this contextual element supported the modularization initiative. Across the college, the power of the "I don't know how" mechanism was neutralized by the power of training activities.

Further, powers may be possessed without being exercised and may be exercised without being actualized (Reed, 2001). For example, a computer possesses the power to create a document, but if no user ever selects the software on the computer for that purpose, that power is possessed but not exercised. However, a user may select the word processing program but because of lack of training and experience use it for only the simplest documents, thereby exercising but not actualizing the power of the computer. In this study, the modularization project and its tools possessed powers; these powers were realized differentially in departments—unexercised, exercised without being actualized, and actualized—due to the interactions with powerful cultural ideations resident in the departments.

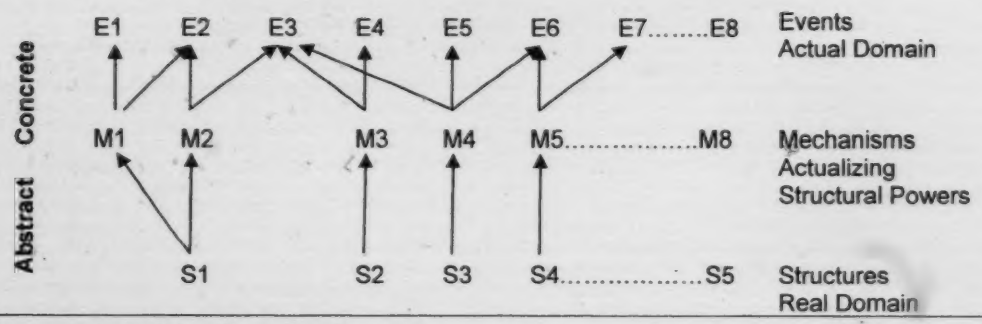
Organizations have positions and roles into which agents enter (as does broader society). Attached to these positions or roles are activities or practices that "come with the territory;" that is, an instructor has certain positioned practices such as attending class, devising assignments, administering examinations, etc. (Nash, 2005). A department head is expected to implement strategic change initiatives mandated by upper management. Of course, actors in these roles can engage in the positioned practices (Fleetwood, 2004) in various ways and can

invent new practices, but only those that are at least minimally consistent with the current web of practices.

Structural mechanisms are those extensions of positioned practices that facilitate those practices. In an organization, there are structural mechanisms for recruiting, monitoring, rewarding, and sanctioning members of the organization. Individuals, who have a plethora of causal powers, interact with the organization's structural mechanisms; some mechanisms will enhance the ability of the individual to exercise his or her causal powers, while others will actively prevent the actualization of the individual's causal powers. The results of these interactions are evident in the resultant events or activities. Structural mechanisms are those institutionalized processes that manifest causal powers in the actual domain.

Andrew Sayer (1992) diagrams the relationships between structures, structural mechanisms, and events in Figure 1. More abstract components form the base of the ontology and move upward in the diagram to the more concrete components. Structures (S1 – S5) are in the real domain and exert their causal powers through structural mechanisms. Some structures (S1) may activate more than one mechanism while others may not activate any (S5) in a given causal cluster. Mechanisms (M1-M8) can act on one or more events (E1-E8) in the actual domain. Some events will have many mechanisms acting at the same time. For example E3 is being acted on by M2, M3, and M4.

Figure 1 Structures, Mechanisms, and Events



Source: Adapted from Sayer, 1992, p. 117

A cluster of causal constituents (typically social structures and cultural ideations) create causal configurations that emerge from the collectivity of the individual structural, cultural, and

agential powers. Properties emerge from the unique combination of constituents that are not resident in any individual constituent (Fleetwood, 2004). The resulting causal configuration has powers that are greater than the sum of the powers of its parts. Thus, clusters of causal constituents create generative mechanisms that impact outcomes. Further, no two causal configurations are ever exactly the same due to subtle nuances of difference in any component of the configuration; therefore, different relationships have different generative mechanisms that manifest in differing powers. In this study, both the departments of Hospitality and Health had centralized curriculum components. However, the subtle difference in Health having only course outlines housed in binders not readily accessible to faculty, compared to Hospitality having additional specific curriculum components like recipes and descriptions of hospitality practices housed in a filing cabinet for all to access, led to highly differing generative components resulting in very different departmental outcomes.

Each causal power and mechanism has a tendency to be enacted in a certain way. However, these tendencies merge with the tendencies of other causal powers and mechanisms and may or may not be realized in action. A metaphor for a tendency is a "push or pull" —a force that may or may not result in movement. Thus a causal power or mechanism may not always bring about an effect, but it always has the potential to do so. The implication for a critical realist researcher is that the task of research is to determine which tendency is actualized at any given point in time. In this study, I have included timelines to uncover how and when tendencies were actualized in this study.

Research based on critical realist ontology is discursive; it moves to an explanation through reasoning. Research starts with an examination of concrete events and through abstraction aims at understanding the pre-structured nature of the social life and then takes that understanding and returns to analyze concrete events, actions, and processes in the light of this knowledge (Fairclough, 2005). In the analysis of the findings of this study, I used such a discursive process. Fairclough's advice proved invaluable to my understanding of how to move through the discursive process during analysis.

The ontology of critical realism provides a basis for Archer's theory of change, the morphogenetic approach.

The Morphogenetic Approach

There has been recognition that organizational theory and analysis based on the concept of the "modern organization" is inadequate in application to the 21st century organization. Washbourne and Dicke (2001) in their analysis of change in water management systems in England and Wales found that narratives in the key organizations dealing with water management did not uphold the "grand narrative of progress" (p. 93) of the modern organization. They posit that organizational members haven't evolved their assumptions about organizations from a modern to a postmodern view. They advise that we have to address the tensions of structure and agency within the many different levels, temporalities and strategic applications in which they arise within organizations. Archer has taken up the challenge of developing a social realist theory to support practical social analysis.

Archer recognizes the complexity of society and separates the structural (organizational) and cultural (ideational) domains as she contends that the domains are autonomous and substantively different from each other (Archer, 1996). However, more importantly, she recognizes that the interplay between structure and agency on the one hand, and culture and agency on the other raise identical analytical challenges and analytical frameworks need to separate culture from structure to facilitate a greater understanding of the interplay between them and between their relationships with human agency. In this study, the Context, Mechanism, Outcome analytical framework (Pawson & Tilley, 1998) was adapted to separate structural and cultural mechanisms to aid in a fuller understanding of the strategic change process.

Archer (1996) defines the broadest concept of culture as all "intelligibilia." In philosophy, intelligibilia is defined as objects determined solely by reasoning (Nagel, 1976). Archer further distinguishes the cultural system from the broadest conceptualization of culture. The cultural system is a sub-set of propositions to which the law of contradictions can be applied. This

definition of cultural system is methodologically workable and has been used in this study to define the cultural elements.

In her 1995 book, *Realist Social Theory: The Morphogenetic Approach*, Archer presents many arguments against definitions of structure that privilege agency as the cause of phenomena (upward conflationism), or privilege structures (downward conflationism). Rather, Archer's conception of structure is based on the idea of "structures as quintessentially relational" (p. 106) which are real because they have emergent properties. Because structures are relationships that "reveal" themselves through their emergent powers, they are more than practices or resources. We become aware of these deep underlying systems of relations through experiencing their emergent powers. We experience these powers through their obstructing or facilitating our personal projects.

Archer further explicates critical realist ontology by speaking of a "social realism" that honors the temporal nature of structure and culture and the agential activity that results in regenerating structures and cultures or changing them. She puts forward two propositions for the analysis of the interplay between structure and agency over time: 1) that structure and culture necessarily pre-date the action(s) leading to their reproduction or transformation; and 2) that the outcomes of structural and cultural change necessarily post-date the activities that result in change. Human agency occurs within a web of structural and cultural powers that constrain or facilitate activity. These powers flow from the structures and cultures that resulted from previous human activity. For example, individuals are born into a certain class or familial and socio-economic background which provides access to certain experiences (and not others) that constrain or motivate the individuals to act in certain ways. These individuals' actions then, in turn, result in structural and cultural reproduction or change. The phenomenon of structure and culture pre-dating activity occurs at all levels of institutional and organizational activity, from broad institutional field-level structures to micro departmental cultural logics, and is critical to understanding how change occurs.

Archer recognizes the emergent powers of individuals gathered into groups. Primary agents are individuals who have effects on stability or change in the most passive way, by merely

being within the stability or change. Primary agency occurs within organizations as individuals gather together. An academic department in a post-secondary institution is a collectivity in which each agent contributes to the structure and culture of that department, in the most passive way, simply by being one more person who makes the department one person larger. Since certain personality types are drawn to certain disciplines (Kolb, 1981; Myers, 1993; Myers & Myers, 1995), the collective of these individuals creates the anterior culture of the department. As the departmental collection of agents discovers common interests, it assumes a departmental identity and begins to act collectively (Swanson, 1992). Individual instructors in a department have self-interest and engage in activity to meet those interests. It is an important component of Archer's social theory in alignment with realist ontology that collectives of agents have emergent powers such as the capacity to articulate shared interests, organize for collective action, and exercise influence on decisions.

Archer (2007) has also drilled down into the "internal conversations" of persons to better understand how individuals become the arena in which structure, culture, and agency interact. She contends that individuals select a path to move through their life and their resulting actions activate constraints and enablements of the structures and cultures in which the individual is embedded. Individuals reflexively consider the constraints and enablements and adjust their actions to those practices which appear to enable them to accomplish what they most care about (Leonard, 1994).

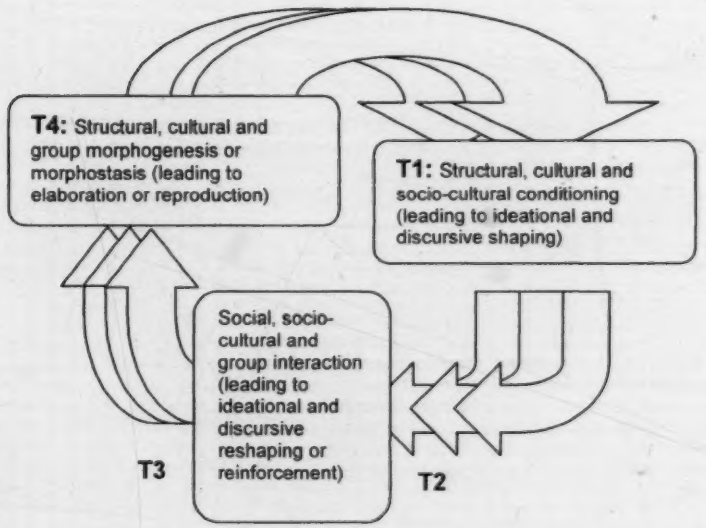
Archer's research into the internal conversations of individuals and her findings support Weick's (1995) position that actors make reflective choices in their behaviour, in what they think about events, and in their feelings. Actors create reality by their actions; intentions and choices are causes. For example, I choose to be angry about an event; subsequently, I choose to withhold my professional engagement with a client, and the client then decides to take his or her business elsewhere. The "cause" of the client's leaving is a consequence of a choice I made. Causes are often consequences of choice. This is related to the notion of relationship psychology (Stacey, Griffin & Shaw, 2000) in that internal conversation (reflexivity, sensemaking) leads to a choice of behaviour and emotion. I bring my emotion to the external conversation

between my client and myself; as we interact, my choice to feel angry now colors the interaction and the relationship.

Individual agential choices of behaviour, thinking, and feeling are made in the messy context of potentially reinforcing, competing, or contradicting values, beliefs, and logics that the individual holds. If I value my relationship with a client, I may choose not to withhold my services even though I am angry. If I value the relationship more than the root cause of my anger, I will choose another way of dealing with the situation. Ideations, such as values, are linked to agential choice.

Culture and structure provide the context in which agency operates. The intersection of all three cycles of cultural, structural, and agential morphogenesis is with people because it is people who act on the world. Figure 2 illustrates the morphogenetic cycles of structure, culture, and agency.

Figure 2. The Morphogenetic Cycle


T4: Structural, cultural and group morphogenesis or morphostasis (leading to elaboration or reproduction)
T1: Structural, cultural and socio-cultural conditioning (leading to ideational and discursive shaping)
Social, socio-cultural and group interaction (leading to ideational and discursive reshaping or reinforcement)
T3
T2

(Horricks, 2007, 1995, p. 4)

T^1 indicates a time before the beginning of a study of morphogenesis that encompasses the history of interactions that have led to a conditioning of structures, cultures and agents. Collectively these conditions comprise the context of a given change. In this study of strategic change, contexts varied amongst departments due to unique departmental histories.

T^2-T^3 is the duration of time when interactions between people occur that lead to an outcome. For a study of strategic change, T^2 is the time of the initiation of an initiative. T^4 is the time when we would see the outcome of the morphogenesis: the outcome of a strategic change. This is the time in a study when data would be gathered to identify and study outcomes.

Because the three cycles are relatively autonomous, they can be in alignment with each other such that their tendencies all lead to a similar outcome at T^4. In such an alignment, the cycles can produce a synergistic situation. In this study, the Department of Hospitality Programs had the structural, cultural, and agential cycles in synergistic alignment, resulting in actors in the department readily engaged with the strategic change of the modularization initiative. Alternatively, the cycles can be asynchronous such that activities counteract each other and the outcome is fragmented or different from that intended. It is the interaction between the cycles that produces unique outcomes in largely similar situations. This is why three different departments in one post-secondary institution can demonstrate widely varying outcomes within one change initiative.

The morphogenetic cycles depicted in Figure 2 and realism's focus on temporality have implications for analysis. That is, when examining a social situation of interest, the researcher must resist the logical starting place of T^2 (when the social interaction starts) but rather begin analysis at T^1—when the structural and/or cultural conditioning was formed—to understand the context in which the interaction takes place (Mutch, 2002). In this study, the individual departmental contexts in place, which were a result of structural and/or cultural conditioning before the initiation of the strategic change initiative, had critical effects on the outcomes found at T^4.

The morphogenetic approach is elegant in its theory, and Archer's attempts to apply the concepts of critical realism are admirable. The challenge is that even when the morphogenetic

theory and all of its elements are understood, there is a need to work out how to use her theory for gathering and analyzing data. In her writings, her illustration of the application of the morphogenetic approach has been to the grand sweeps of history, analyzing the structural elaboration and emergence of national education systems. Such large scale theorizing provides little direction for analysis at more micro levels of analysis such as that of this study. Despite the very attractive features of the emphasis on temporality in analysis and the separation of structure and culture, on the subject of the "how to" of analysis, Archer is largely silent (Domingues, 2000). In this study, I addressed this challenge by adapting Pawson and Tilley's (1998) Context, Mechanism, Outcome (CMO) analytical model to create explanatory causal configurations (Fleetwood, 2004).

Further, Archer's approach does not provide us with any direction for addressing the issue of how groups come to share a collective subjectivity that leads to collectively created outcomes. Collective subjectivity is neither individual agency nor structural or cultural regularities (Domingues, 2000). In this study, I have used Hedstrom and Swedberg's action-formation mechanisms (1998) and Hedstrom's (2005) Desires, Beliefs, Opportunities (DBO) theory to address this gap.

Despite her encouragement to her readers to engage in the analysis of the interplay between structure, culture, and agency, Archer's morphogenetic approach does not necessarily allow researchers to break free of the polarization between the individual agent and the broader societal structures and cultures. Giddens' theory of structuration addresses this polarization by his position that structure and agency are inseparable as they are mutually constituted. Archer's morphogenetic approach to analysis of reproduction and change is often contrasted with Giddens' structuration theory (Stones, 2001). In the next section, I will provide a short comparison of the two theories.

Giddens' Structuration and Archer's Morphogenesis Compared

Giddens' theory and Archer's theory both address the issue of agency-structure divide, but in different ways. Giddens' structuration theory (1984) integrates structure and agency by

viewing them as mutually constituted or "two sides of the same coin" (Archer, 1995; Ritzer & Goodman, 2004). Giddens' approach to addressing the problem of the relationship of agency to structure results in his viewing the two, not as opposing elements in a dualism, but rather as the complementary components of a duality: a single unit. Reducing structure and agency to two sides of the same coin does not allow for analysis of the *interaction* between structure and agency (Beckert, 1999; Selznick, 1996).

In contrast, based on critical realist ontology, Archer (1996) contends that agential and structural powers are real in that they have an effect or make a difference, and it is the *relationship* between the causal powers of structure and agency that provides a fertile and rich area of investigation and holds much promise for enhancing understanding.

Archer criticizes Giddens for his view of structure and agency as one unit and his focus on recurrent social practices as the point for analysis because it would eliminate the opportunity for understanding "issues surrounding the relative independence, causal influence and temporal precedence of components" (Archer, 1995, p. 94). She critiques Giddens for his lack of recognition of the temporal nature of structures in building contexts prior to the phenomenon under study, contending that for structuration theorists, structures are only realized in the instantiation of a social interaction and therefore cannot precede the human interaction, nor be the emergent outcome of the activity. Stones (2001) puts forth an argument that, although structuration theory tends to focus on the moment of agency, Giddens implicitly recognizes the pre-existence of structural "potential constraints." If structures have potential constraints, those constraints logically pre-exist the moment that the agent chooses to act in opposition to those constraints. Stones agrees that Giddens' work does not foreground temporality but argues that overemphasis by critics of Giddens on the "instantiation" as being the moment that structures come into being in agential interactions is a result of reading Giddens unfairly.

Further, Giddens postulates that structures have no independent existence outside of the knowledge that individual agents have about their daily activity (1994, p. 87-8). Realists postulate the independent nature of structures underlying social interactions. They recognize that practices can emerge and be reproduced by multiple mechanisms—each of which might be quite

conceptually different. Practices can also emerge from the interaction of multiple structures (Figure 1).

Archer criticizes Giddens for his use of the concept of the cultural system as a compilation of meanings operating in praxis where each cultural agent is very knowledgeable and aware of the production and reproduction of society and where culture results from skilled performances of these actors. She contends that this folding of culture into agency reduces the ability of researchers to understand the interplay between cultural system components and individual actors' actions.

In this study, because the strategic change initiative occurred over several years, the temporal nature was a critical component for this study. Additionally, the literature regarding change in higher education institutions indicated that culture was an important influence. Further, Giddens' approach places more emphasis on agential activity than on the interplay between structure and agency. As a result, I chose to use the morphogenetic approach of Archer to guide the analysis in this study.

Stones (2001) makes several convincing arguments that would position Archer's and Giddens' theories as much more compatible that the critics of either of the theorists. Stones argues that the theories' seeming incompatibilities are really a result of differences of emphasis in the writings of the authors and not in overwhelming incompatibilities as Archer and others have posited. Stones proposes that further systematic investigation of the two theories and their integration would provide a much more nuanced basis for analysis than either one alone.

The next section explores the concept of institutional logics as a cultural system component that influences individual agency. Institutional logics were used in this study as the data revealed that the teaching and learning logics and managerial and marketing logics were active in the implementation of the modularization initiative.

Institutional Logics and Culture

Institutional logics are frameworks that house systems of assumptions, beliefs, and rules about what reality should be (Leca & Naccache, 2006). Because institutional logics focus on a

prescription of an ideal social reality, they can be considered cultural ideations. Greenwood and Hinings (1993) recognized the culture of an institution as the composite of its institutional logics and how closely actors conform their activities to the values and beliefs embedded in those logics. Thus, institutional logics can be seen as a causal mechanism of actors' behaviors (Barley & Tolbert, 1997).

Leca and Naccache (2006) posit that institutional logics are analogous to structures and are therefore in the real domain, just as Archer places cultural ideations in the domain of the real, separating them from structures. In the analysis of this study, the concept of institutional logics is used as a synonym for cultural ideations. Cultural ideations are cultural components that have mechanisms and powers analogous to structural powers and mechanisms. Table 1 illustrates how institutional logics relate to critical realism's domains of reality.

Table 1 Stratified Models

Domain	Critical Realist View	Institutional Analysis
Real	Structures/Culture	Institutional Logics
Actual	Events	Institutions
Empirical	Experiences	Experiences

Adapted from Leca & Naccache, 2006

There are two institutional logics that were activated in this study—the teaching and learning logic and the managerial and marketing logic. I will address each of these in the two sections that follow.

Teaching and Learning Institutional Logics

In higher education, there has been an ongoing discussion on how best to facilitate learning for the highly diverse student body of the 21st century (Lounsbury & Pollack, 2001). As educators have struggled with the question of how best to engage with teaching and learning, two competing logics have emerged (Barr & Tagg, 1995). The traditional logic, or instructional paradigm, is based on a positivist ontology that holds that reality is objective and exists separate

from individuals' knowledge of it. The instructional paradigm that emerges from this ontology is one of the "sage on the stage"—that is, the instructor holds the knowledge of the "way things are," and, as the expert, transfers that knowledge to students largely through lecture. The emerging learning paradigm holds that knowledge is constructed by the learners through a variety of experiences that are somewhat unique to the learner. As such, learners are encouraged by a "guide on the side" to explore with other learners in a communal and supportive environment. Movement from the traditional instructional paradigm or institutional logic shifts the focus from instructing to learning. Some of the characteristics of the two identified institutional logics are summarized in Table 2.

Table 2. Competing Logics of Teaching and Learning in Higher Education

"Instructional" Institutional Logic ("Sage on the Stage")	"Learning" Institutional Logic ("Guide on the Side")
Assumptions about knowledge and learning	
Higher education institutions are "storehouses of knowledge."	Higher education institution is the "learning environment."
Knowledge about reality exists "out there."	Knowledge is particularistic and shaped by individual experience.
Knowledge comes in "bits" and "chunks" delivered by instructors.	Knowledge is constructed and created and exists in the learner's mind.
Learning is cumulative and linear.	Learning is the nesting and interacting of frameworks of knowledge.
Learning environment is competitive and individualistic.	Learning environment is cooperative and supportive.
Faculty Practices	
Instructor is the expert/disseminator of knowledge.	Instructor as innovative facilitator.
Instructors are primarily lecturers.	Instructors are primarily designers of innovative learning environments and facilitators of learning experiences.
Instructors and students act independently and in isolation with ritualized behaviours.	Instructors and students work as a team.
Instructors classify and sort students.	Instructors develop students' competencies and talents.
Subject matter knowledge is all that is required to teach.	Good teaching is challenging and complex and requires both cognitive knowledge and craft expertise.

Source: Adapted from Barr and Tagg (1995)

It is important to note that these two competing logics of teaching and learning affect individual instructors' personal identities as characterized by the "guide on the side" and "sage on the stage" metaphors. As has been shown by Meyer and Hammerschmid (2006), in organizational change, new social identities are often required to allow actors to behave in new ways. Kellogg (1995) found that individual agents mediate institutional stability and change in

their actions in accord with their personal identity and its relationship to the situations in which they find themselves. In her study of surgical residents undergoing imposed change, she found identities and practices depended on the institutional logic that individuals espoused and interactions between individual logics and the logic embedded in the imposed change. This interaction contributed to the emergence of new practices. New practices interacted with old and over time, adapted practices emerge which, in turn, shape change at the institutional level. Seo and Creed (2002) recognize that competing institutional logics do not resolve by one triumphing over the other, but rather that one logic is layered on another. Reed (2001) speculates that hybrid structures could emerge from the interaction of competing logics in higher education similar to those in the British National Health Service. Centralized strategic policy control and devolved autonomy at the department level provides a space for the evolution of innovative practices.

In this study, the competing logics of these two approaches to teaching and learning were both present and largely defined departmental members' identity in the teaching and learning situation. As the modularization initiative with its embedded logic of experiential learning was implemented in the college, the preceding studies would indicate that the two logics could merge to create new practices unique to the departmental contexts. In part, this adaptation of existing practices to satisfy centrally-mandated requirements would explain why loose coupling of departments in higher education institutions yields a variety of outcomes from top-down initiated strategic change. Additionally, because the teaching and learning logics define part of individual instructor's identities, one would expect strong resistance when the logics collide—a phenomenon that was observed in this study.

Managerial and Marketing Logics in Higher Education

Additionally, higher education has been experiencing the intrusion of managerial practices (Skolnik, 1998) with its institutional logics that are in opposition to the traditional academic cultural norms and values of collegiality and autonomy. Gleeson (1999) states that managerialism has been introduced into the higher education sector to address issues of reduced

funding and calls for higher efficiency. The result is that academics in higher education in the role of department head find themselves mediating between professional and managerial institutional logics (Chandler, Barry, & Clark; 2002; Gleeson & Shain, 1999; Reed, 2002a, 2002b).

Michael Reed was one of the researchers in a multi-disciplinary project in the UK entitled "New Managerialism and the Management of UK Universities" (Deem, Fulton, Hillyard, Johnson, Reed, Watson, & Edmundson, 2000). In a subsequent article (2002a), Reed foregrounded perceptions of "manager academics" about the threatening nature of the forms that "new managerialism" takes in practice. Some of these forms include performance monitoring, business plan goal-setting, casualisation of employment status, and standardization of curriculum. He states that there is "relatively hostile resistance to the radical encroachment on professional autonomy and power that... [such forms] necessarily entail" (p. 175). These processes of "new" managerialism are mechanisms by which structures encroach on the agency of the professional staff (Young, 2000). This study at LEC shows that the power of the "new managerialism" mechanisms can be in direct conflict with norms and values to a greater or lesser degree in individual departmental cultures at the college.

An institutional logic related to the managerial logic is the "learning as commodity" logic. With the advent of reduced public funding for U.K. higher education, strategies were devised for higher education institutions to market their "product" (learning) most often through continuing education or extension services departments of the college. To facilitate the marketing of the products, packaging became important to meet both efficiency and quality concerns, especially since the instructors of these programs were often adjunct, part-time, and relatively inexperienced (Trowler, 2001). The modularization of curriculum into discrete units that could be bundled and unbundled to meet the needs of the learners (in this logic called "customers") addressed the demands for economical and efficient methods of delivery. Modularization results in courses made up of a number of discretely (and, potentially, independently) taught and assessed units of study (Trowler, 1998). Learners can choose to build their own learning program by selecting the courses and modules to meet their needs. As such, curriculum becomes a matter of consumer choice rather than being controlled by the "expert"—the instructor. Although modules can be used

by a professional educator in a traditional teaching and learning situation, the use of modules to support the "marketing arm" of a higher education institution has great potential. In Leading Edge College, the marketization logic was clearly signaled by restructuring and evolving the "continuing education" department into the "business development unit." Some characteristics of these competing logics are summarized in Table 3.

Table 3. Competing Logics: Academic Culture to New Managerialism

Focus Moves From *(Academic Culture)* *"Professional Bureaucracy" Logic*	*To* *(New Managerialism)* *"Learning as Commodity" Logic*
Teacher is focus of academia	Learner is focus of academia
Process of instructing	Outcome of learning
Instructor gives direction	Instructor provides guidance
Instruction controlled by professional educators	Learning controlled by learner choice

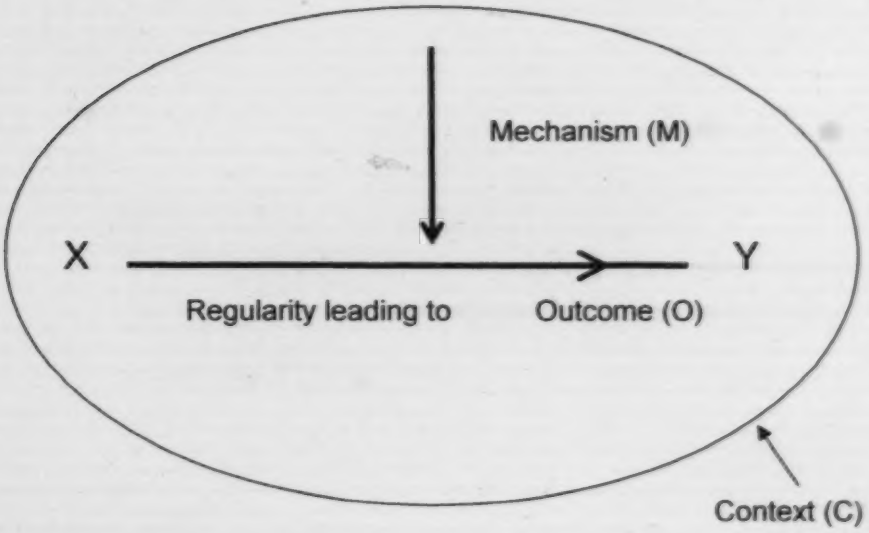
Adapted from Trowler, 1998, p. 8

Institutional logics are cultural system components that have powers and mechanisms to affect agents' engagement with change. In the following section, I examine an analytical framework that was adapted for use in this study to explain how mechanisms of social structures and cultural system components operating in a context can produce outcomes.

The Context, Mechanism, Outcome Model

Pawson's (1996) research focuses on the role of education in changing prisoners' lives. Specifically, he has been involved in evaluating higher education courses being delivered in prisons to determine if prisoners who attend the courses are less likely to re-offend. The stated goal of his research is to discover the combination(s) of individual circumstances and institutional contexts that reduce rates of recidivism. To enable a better understanding of the effects of the "intervention" on prisoners, he employs realism as his ontology. He states that a "realist explanation can be boiled down to three key features"—context, mechanism, and outcome (Figure 3).

Figure 3. Basic Elements of Realist Explanation



Source: Pawson, 1996, p. 300

Pawson's model of the basic elements of realist explanation (Table 4) can be used as an analytical construct. Pawson and Tilley in their book *Realistic Evaluation* (1997) posit that social programs may accomplish their goal, a positive outcome, or fail to meet the goal, a negative outcome, due to underlying mechanisms that operate in groups in varying social and cultural conditions (contexts). The example in Table 4 shows a positive outcome.

Table 4. Context—Mechanism—Outcome

Context	+	Mechanism	=	Outcome
Repeated co-presence of particular motivated offender and suitable victim in the absence of guardian		Offender believes that risks are low, rewards are enough, and crime is easy		High rate of repeat offences, with short-term heightened vulnerability of victim

Source: Harrison, & Easton, 2004, p. 200

A further example of Pawson and Tilley's analytical framework using concepts from Kaneko's (1999) research on the "stop smoking" program effectiveness in various communities is

provided in Table 5. This example illustrates a negative outcome due to a mechanism operating in a non-conducive context such that its causal power is diminished.

Table 5. Context—Mechanism—Outcome Example

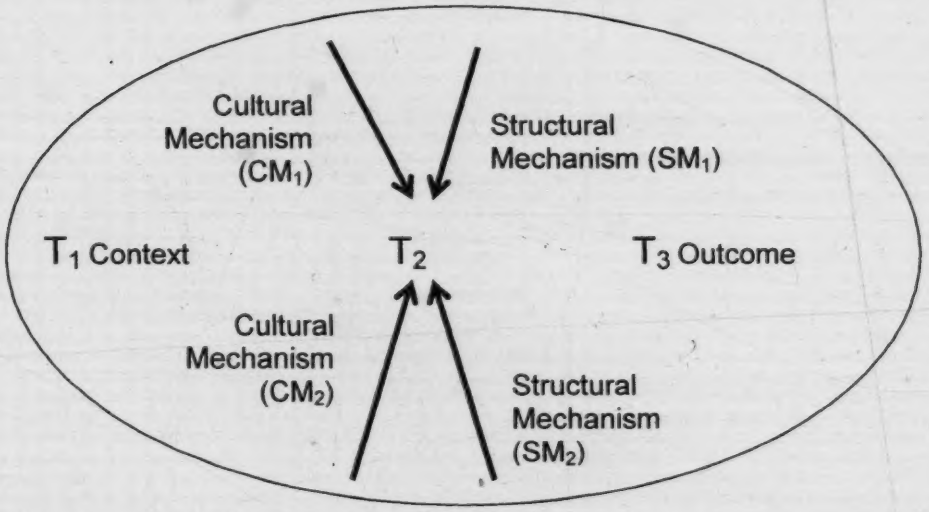
Context	+	Mechanism	=	Outcome
Community has a "social pathology" context: Many social problems		Medicalization mechanism: Presenting to community the harmful effects of smoking is ignored because smoker believes life is at risk from many other factors in troubled community		Failure of cessation of smoking

Source of concepts: Kaneko, 1999

The CMO model has the advantage of providing a concrete way of operationalizing the concepts of critical realism such that explanatory analysis can occur. The use of CMO configurations in analysis facilitates the emergence of theory about the various contextual elements and social structural mechanisms and how they interact to produce outcomes within a specific case. The simplicity of the model provides a useable analytical framework but also risks an over-simplified view of complex phenomena. Pawson and Tilley offer little advice about situations where multiple configurations lead to an outcome—such as departments with multiple subcultures, each with their own unique causal configuration. I have addressed this issue by focusing the analytical efforts of this study at the "meso" level of departmental causal configuration.

In the study, I have used Archer's morphogenetic approach (1995) to supplement the basic CMO model acknowledging the temporality of social change. Thus Figure 4 illustrates that context temporally precedes the structural and causal mechanisms that are of interest in the research. Additionally, Archer (1996a) discriminates between social structural mechanisms and cultural ideational mechanisms. Realists (Archer, 1995, Fleetwood, 2004, Sayer, 1992) recognize the complexity of causal configurations consisting of many structural and cultural mechanisms acting together in relationships to yield differing outcomes in different contexts. These elaborations are illustrated in Figure 4.

Figure 4. Elaboration of Basic Elements of Realist Explanation



Source: Adapted from Pawson, 1996, p. 300

The analysis of the data from this research uses the concept of institutional logics from New Institutionalist theory to articulate cultural ideations occurring in the departmental contexts of the three departments in the study. Table 6 illustrates the alignment of the concepts of new institutionalist theory and realist ontology with the CMO model.

Table 6. Domains and Realism, Institutionalist Analysis, and CMO Model

Domain	Realist View	Institutional Analysis	Context, Mechanism, Outcome Model
Real	Structures/Culture	Institutional Logics	Context, Mechanisms
Actual	Events	Institutions and Organizations	Events
Empirical	Experiences	Experiences	Experienced Outcomes

Adapted from Leca & Naccache, 2006 and Pawson, 1996

To incorporate Archer's recognition of the importance of temporality in the morphogenetic approach, and her distinction between social structural mechanisms and cultural ideational

mechanisms (or institutional logics), Pawson's basic analytical framework has been modified for the purposes of this study. An example is provided in Table 7.

Table 7. Modified CMO Analytical Framework

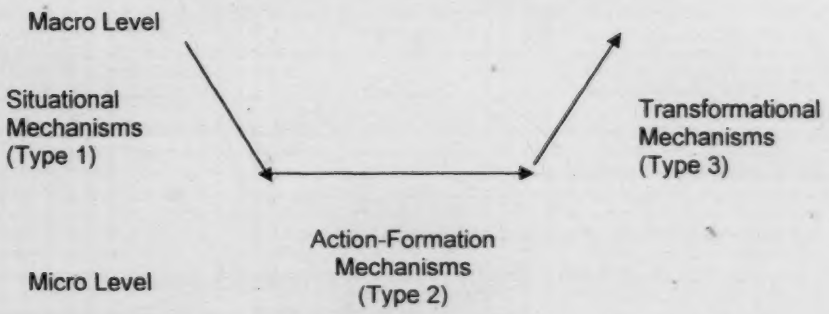
Context (T_1)	+	Structural Mechanism (T_2)	+	Cultural Mechanism (T_2) (or Institutional Logic)	=	Outcome (T_3)
Contextual Element 1		Structural Mechanism 1		Cultural Mechanism 1		Outcome
Contextual Element 2		Structural Mechanism 2		Cultural Mechanism 2		Outcome

Adapted from: Pawson & Tilley, 1997

A Typology of Social Mechanisms

Hedstrom and Swedberg (1998) have created a typology of social mechanisms (Figure 5) that is helpful for explaining the outcomes of the departments in this study.

Figure 5. A Typology of Social Mechanisms



Source: Hedstrom & Swedberg, 1998, p. 22

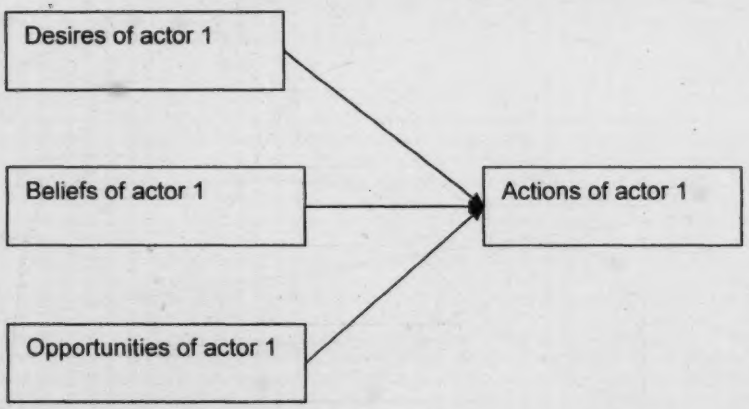
Type 1 mechanisms explain how, at a given time, the macro states—contexts, macro level mechanisms—affect the behavior of individuals. Type 2 mechanisms explain, at the micro level, how an individual's desires and beliefs in the presence of opportunities generate a specific action. Many social-psychological and cognitive mechanisms operate at this level. Type 3

mechanisms explain how a number of individuals interact with one another, and together, their individual actions influence each others' actions such that collectively they create an intended or unintended outcome. In this study, the collective outcome was the departmental engagement with the modularization initiative.

Desires, Beliefs, Opportunities, and Action-Formation Mechanisms

Hedstrom (2005) outlines a theory of Type 2 action-formation mechanisms based on the desires (D), beliefs (B), and opportunities (O) of the actors in a situation to engage in a particular action (Figure 6). Actions are intentional—not the result of accident or autonomic functions. A belief is a proposition about how the world is and a desire is a wish or a want. Opportunities are "action alternatives" that are known to the actor but exist independent of the actor. I must know about the opportunity to modularize curriculum for this opportunity to be available to me. Opportunities can affect an actor's beliefs and desires; without the opportunity (O) for promotion existing independently from me and without my knowledge of that promotional opportunity, I cannot come to want (D) that promotion, nor believe (B) that I am capable of gaining that promotion.

Figure 6. Core Components of the DBO Theory



Source: Hedstrom, 2005, p. 39

Hedstrom & Swedberg's (1998) model of social mechanisms and Hedstrom's (2005) DBO model of Type 2 action-formation mechanisms will be used in the discussion chapter of this study.

Summary

To provide a foundation for this study, I have presented an overview of the literature on organizational change in the context of higher education including the challenges of leading change in post-secondary institutions. This body of literature enabled me to focus the selection of participants on departmental leaders as they are critical in the broad institutional strategic change process and, as such, provided managerial, collegial, and leadership perspectives.

Some key texts on organizational culture and its relationship to organizational change in tertiary educational institutions were discussed to paint a backdrop of the many ways to understand culture and its effects in organizational strategic change initiatives. These texts sensitized me to issues that arose during the analysis of the findings of this study such as beliefs about what constitutes effective teaching and learning.

The overview I offered of critical realist ontology and the related analytical frameworks of Archer's morphogenesis; Pawson and Tilley's Context, Mechanism, Outcome (CMO) model; and

Hedstrom and Swedberg's typology of mechanisms provided structure to the analysis of the findings of the study. Hedstrom's Desires, Beliefs, Opportunities (DBO) model facilitated interpretation of the findings.

I also briefly presented selected literature explicating institutional logics focusing on teaching and learning, and managerial and marketing logics that provided examples of cultural ideations to aid in the understanding of the beliefs held by departmental members in this study and in the understanding of some of the broader field level pressures affecting the college that is the site of this study.

CHAPTER III: METHODOLOGY

Introduction

Realist ontology is a philosophy of science and, as such, does not prescribe specific research methodologies but does lead to particular basic premises such as complex causal mechanisms as influencing behaviour (Sayer, 1992). The use of such premises requires rich data and an intensive research design. As a result, this study uses qualitative methodology, relying on interviews, focus group discussions, and reflective writing to understand the structural, cultural, and agential mechanisms that resulted in individuals' engagement with strategic change.

> Educational researchers need to examine: real structural properties...; interpretations of those structures by relevant social actors; real relations between different structures...; the intentions of the players in the game...; the unintended consequences of actions; the subsequent effect of those intended and unintended actions on structural properties; and the degrees of structural influence and agential freedom for each human interaction." (Scott, 2000, p. 3)

Selection of the academic departments examined in this study was based on empirical evidence of the outcomes of their engagement with the modularization initiative, sorting the departments into high, moderate, and low levels of engagement.

This chapter outlines the research design and methodology used for this study and their alignment with critical realist ontology. In this chapter, I describe the process of gaining permission to do the study in the cooperating college and outline the selection of the participants. I then overview the analytic steps, address trustworthiness, and discuss ethical considerations.

Gaining Access to the Research Site

The site of this research is a post-secondary institute in Alberta. Between March 1999 and June 2003, I led the modularization initiative at Leading Edge College to restructure curriculum into modules using a particular pedagogical design. I approached the Vice-president, Academic requesting permission to conduct research at the college around the implementation of the modularization initiative. Formal permission was granted to embark on the study.

Subsequently, I contacted the relevant deans at the college advising them of my planned activities so as to solicit their support and advice, which were graciously given by all of them.

The Case Method and Critical Realist Ontology

During my experience with the modularization project at the college, I observed academic departments' varying degrees of acceptance of and engagement in the project, both of which seemed to depend on the unique departmental culture. Since this study's focus is on strategic change and the interplay between culture, structure, and agency, the case study approach was selected. A case study focuses on the particularity and complexity of a single case (Stake, 2000) to understand an activity and its significance. In this study, the case consists of a complexity of interpenetrating, overlapping, and interacting structures and mechanisms (Joseph, 2003). Because of this complexity, rich data are required to understand how different powers emerge or are activated by behaviours of actors in the milieu. Ackroyd (2004) contends that the clarification of the nature of a mechanism must be done in a context. In this study, "variables are so embedded in the situation as to be impossible to identify ahead of time; [therefore], the case study is ... the best choice [of research design]" (Merriam, 1997, p. 32).

Further, for research based on the critical realist ontology, causal explanations are required to provide mechanisms that arise out of actors' internal dispositions, meanings, intentions, desires, and beliefs (Ekstrom, 1992). Only case study research can begin to provide the richness required to uncover such an explanation. Critical realism recognizes the intentionality of individuals as real; in other words, people act on their intentions based on their own perspective and reasoning. As such, reasons may be causes and understanding individuals' thinking requires qualitative methods (Ackroyd, 2004).

In this study, the interaction of causal powers in different departmental contexts produced varying degrees and forms of engagement with modularization. To understand the variability by department, this research was conducted in several academic departments to define the contexts—cultures, structures, institutional logics of the departments—and to identify the causal mechanisms and their interactions. The strategy of investigating three departments at Leading

Edge College is the use of multiple embedded "mini" cases. Large constituents of the context are controlled in such an approach allowing for a more in-depth understanding of the deep underlying mechanisms of the phenomenon under examination (Harrison & Easton, 2004).

This case is also bounded by the timeframe in which the strategic change implementation took place as recalled by the participants. Archer's morphogenetic approach places a high degree of emphasis on the temporality of individuals' understandings, perceptions, and knowledge. The interviews were conducted over a five-month period followed by a focus group six months later. Participants could only report on their experience up to that time and any reflexive insights that they might have had up to that date. More insights could have possibly been generated if further data had been gathered at a later stage. Such data could uncover any morphogenesis of departmental cultures and/or institutional structures resulting from the modularization initiative.

Selection of Participants

Participants in this study were selected purposively. Individuals were chosen to represent academic departments that demonstrated high, low, and moderate engagement based on college reports of the percentage of the courses in a program published for student use at the end of the strategic implementation and the quality of the modules produced. The targeting of departments with differing engagement rates provided "mini" cases that would allow for analytical comparison across departments.

Selection of the departments was based on a count of the percentage of courses published in a modularized format. Further, departmental engagement was inferred by the *quality* of the modules produced. That is, compliance to a minimal standard could result in a simple count of all courses being modularized and published for students but would not reveal the whole story. Another program might also publish all of their courses with enhancements such as content and multi-media indicating a higher degree of departmental engagement. Quality checks were reported to deans of departments by the modularization team, and those reports were used in this study.

Because departmental leaders are familiar with both the causal mechanisms invoked from upper management and the department, they are in a unique position to provide insight. Criteria for selection into the study included holding a leadership role; membership in a selected department; openness to participation in the research; and the potential for a positive, productive relationship with me as the researcher. I selected departmental leaders as informants because they occupy a unique space in the organization. That is, they managed their departmental activity in modularization and were directly engaged with the modularization initiative as teachers and leaders. Inviting department heads to engage in this study provided me with the opportunity to study the effects of strategic change implementation on leaders of change and offered departmental leaders the opportunity to reflect on and learn from their experiences in the modularization initiative.

Eight participants represented three (high, moderate, and low engagement) departments in this study. Two individuals represented six programs in the "moderate engagement" Department of Health Programs; two individuals represented seven programs in the "high engagement" Hospitality department, and four individuals represented seven programs from the "low engagement" Business department. Eight participants were selected so that each department was represented by a minimum of six programs (or most of the department's programs) (Table 8). Although two further participants were interviewed representing two moderate and low engagement departments, these data were not included because they brought nothing new to the analysis. Also, the two participants did not fully participate in all the data-gathering activities of this study.

Table 8. Research Study Participants

Level of Engagement	Number of Participants	Department	Number of Programs Represented
High	Two	Hospitality Programs	Seven
Moderate	Two	Health Programs	Six
Low	Four	Business Programs	Seven

As the leader of the modularization team who facilitated the implementation of the modularization initiative, I knew each of the participants as department heads who were required to engage departmental faculty with the modularization initiative. Of the eight participants, four of them I knew only in their capacity as department heads. The two participants from the Health department and one from the Business department had worked with me on other projects prior to the modularization initiative, so I knew more about their project management and teamwork skills than I knew about the other participants in the study. One of the participants from the Business department had also been an informant in a previous study I had done at the college, and we knew each other well as a result. The participants who had worked with me prior to this study approached the interviews as an opportunity to actively and collaboratively explore and learn about change at LEC. I believe that the other participants were comfortable with the interview process but perhaps acted more as reporters than as collaborative participants. If I had still been employed at LEC, I would have been much more sceptical about participants' motivation for being involved in the study as they may have viewed me as influential in their careers at the college. Since I had already moved to another employment opportunity, I believe that participants wanted to contribute to the study and responded to the interview questions to the best of their ability.

My previous role at the college provided me with the knowledge of appropriate times to access the study participants, and my collegial relationships with other college staff meant that they readily provided meeting rooms for the interviews and the focus group.

Research Design

This study has an intensive research design (Sayer, 1992) requiring examination of a large number of potential constituents of departmental causal configurations to uncover those essential pieces that could describe and explain complex social actions during strategic change implementation (Moren and Blom, 2003). A critical realist study has the goal of identifying mechanisms and describing how they are manifested in events (Danermark, 2002). "Intensive design" studies causal groups (in this case, academic departments) through interactive

interviews, ethnography, and qualitative analysis that results in a causal explanation of events that may not be representative of similar cases (Danermark, 2002).

Although case study methodology is well-suited to critical realist ontology, it does not claim any particular methods for data collection or analysis although interviews, documents, and personal observations are common (Merriam, 1988, 1997). The design of this research included interviews, a focus group, reflective writing of participants, and the use of public documentation and records. Public documents were used to determine engagement of departments, to understand the communication of timelines and standards during the initiative, and to confirm aspects of the initiative reported by the participants. Table 9 summarizes the data gathering activities followed by a full explanation of each of these activities.

Table 9. Data Sources

Data Source	When Collected	Notes
Interview Transcripts	Fall 2003 – One year after completion of the three-year strategic change	Eight participants, three hours each over two sessions
Focus Group Transcription	Spring 2004 – Six months after the completion of the interviews	Five participants representing three departments
Reflective Writing Guide	Completed at the time of the focus group	Explored causal powers and mechanisms
Validation Document	Completed at the time of the focus group	Validated themes from initial analysis of the interview transcripts
Public Documents	Accessed throughout the study	Confirmed timelines and other aspects of the change initiative reported by participants

Interviews with each of the eight participants were carried out over two sessions, no more than one month apart, that were each approximately ninety minutes long. Two sessions were used to minimize fatigue that could potentially occur with one very long interview. Although it was

not anticipated that participants would reflect on their responses between interviews, such reflections did indeed occur, resulting in richer data. The interviews were conducted using a semi-structured format (Pawson, 1996) that began by focusing on the departmental context and then moving through a series of questions (See Appendix A for Interview Guide). Participants were given a great deal of latitude in where they wished to lead the discussion after initial prompting by a question. This approach was chosen as their perspectives and insights were critical pieces of data, and their articulation could be evoked more easily this way. I used an iterative strategy such that both the participant and I explored the fullest answer to the questions posed (Connell, Lynch, & Waring, 2001). This strategy includes rephrasing and reconstructing participants' comments to determine if an accurate understanding of the comment(s) has been received. This strategy allowed me to explore basic assumptions that interviewees held about the college in general (Connell, Lynch, & Waring, 2001) and their understanding of the mechanisms that caused their departmental colleagues to engage with the modularization initiative the way they did. This strategy also gave me the opportunity to enter into the discussion of mechanisms in various ways so as to better understand participants' interpretations.

Interviews were taped, transcribed verbatim, and edited only for repetitions, and the text of transcription was returned to the individual participants for validation and extension of their responses. All participants returned their transcriptions promptly with only minor corrections. The validated transcripts each comprised an average of twenty-four thousand words. After all participants had validated any corrections that they requested on their individual data, initial analysis focused on grouping and summarizing the data into broad themes and categories.

The results of this initial analysis were used to plan for the focus group and to design a pair of documents which were then administered at the focus group event. The first document was a Reflective Writing Guide which explored certain components that had come out of the interview data focusing on the current state of the modularization initiative, the participants' predictions of future work with the initiative, causal mechanisms and their interaction during the modularization initiative, barriers and catalysts to engagement with the initiative their department had experienced during the initiative, and recommendations to senior staff regarding the change

implementation. The second document was a Validation Document which captured specific quotes that illustrated thematic barriers and catalysts to change that had emerged from the initial analysis of the interview data. Participants were asked to indicate whether particular themes were also operating in their context and, if so, how and when did they manifest themselves. For example, participants were asked to validate whether their department experienced or used "recognition and celebration of progress" strategies and how that experience might have affected departmental members' perception of the strategic change initiative. The focus group comprised participants previously interviewed for this study (the eight departmental leaders). All discussions from the focus group were transcribed and used as data in the analysis. See Appendix B for the documents used at the focus group.

During the focus group event, participants entered into writing and dialogue about their engagement with change and their experiences of leading change. In addition to encouraging participants' reflections on their past experience, I posed questions about the future of the modularization initiative. Gathering information about participants' views of the future could potentially shed further light on the mechanisms at work in their context. The strategy of querying participants' visions of the future is a form of triangulation as it checks whether the sense participants have made of the past, what they say about the present, and their predictions of the future are consistent. This is in alignment with the morphogenetic approach.

All components of the research described were piloted with a select group of individuals to ensure that the best possible questions and methodology were used in the final study. Three individuals were used in piloting the research components—two in the initial pilot and a third in a final pilot to ensure the research components were polished. Since the research components did not change after the third individual engaged in the pilot, the data provided by this individual was included in the study.

Data Analysis - Process

Data analysis and interpretation in a qualitative case study is a dialogic, iterative process. As such, data analysis was conducted in phases. Table 10 summarizes the process taken and a fuller explanation follows.

Table 10. Data Analysis Summary

Process Step	Output of Analysis
Initial Thematic Analysis of Interview Data	Broad themes including identification of causal powers as experienced as barriers and catalysts
Analysis of Validation Document	Thematic contextual elements and mechanisms experienced similarly or differently across departments as catalysts and barriers
Analysis of Focus Group Transcript	Evidence of contextual elements (CE), social structure mechanisms (SSM), and cultural system mechanisms (CSM)
Reread Interview Data	Evidence of the thematic mechanisms Unique departmental elements and mechanisms

1. Initial data analysis was done upon completion of the interviews to determine underlying themes. Themes were captured in a table and representative quotes from the data were extracted and compiled in a second table for more detailed analysis. Themes were generated based on potential mechanisms that were identified prior to the interviews as well as those emerging from the data. Themes identified included leaders and their skill sets, resources, communication patterns, time available for tasks, training, teaching and learning institutional logics, individual instructor's agency, departmental culture, and institutional structures. During this initial phase of the analysis, each transcript was read at least three times. As indicated above, the data informed the planning of the focus group discussions and the documents used during the focus group event.

2. The focus group Validation Document was analyzed for structural and cultural thematic mechanisms that were experienced *differently* across departments. These mechanisms became the focus of further analysis.

   Those mechanisms that had full agreement by all participants as to their effect on engagement with change were considered to be mechanisms that operated similarly in all contexts and, as such, were not considered to have explanatory power regarding departmental change engagement (Moren & Blom, 2003). Thus, thematic mechanisms that did not appear to have differing effects across departments' data were not considered further. This setting aside of mechanisms experienced as barriers and catalysts similarly across departments "intentionally move out of focus all elements that are deemed inessential to the problem at hand" (Hedstrom, 2005, p. 38).

3. Modified summary Context Mechanism Outcome (Pawson, 1996) tables that distinguished between Contextual Elements (CE), Structural Structure Mechanisms (SSM), and Cultural System Mechanisms (CSM) were constructed for each of the three departments based on the thematic mechanisms identified in the previous phase. Evidence from the focus group data was then inserted to describe each department's experience with the identified mechanisms. Subsequently, each of the interview transcripts was read a minimum of three times to find evidence of the thematic mechanisms identified from the focus group data and any additional unique departmental mechanisms that had not yet been identified.

4. Both the thematic and unique contextual elements and mechanisms were used to create Causal Configurations for each of department.

5. CE, SSM, and CSM data were then aligned into causal timelines to facilitate deeper understanding of the emergence of elements and mechanisms and their interplay to affect the departmental outcome.

As I analyzed the texts—both the data from the interviews and focus group—I used what Alvesson (2002) terms "discursive pragmatism." This attitude towards textual analysis acknowledges the inability of text to mirror some form of objective reality while allowing

interpretations beyond the very strict adherence to analysis of the text only. "Discursive pragmatism acknowledges, given the plasticities of language, multiplicities of meaning and complexities of social practices, but still aims to say something about broader patterns in the interface between language use and discourse-constituted patterns of meaning" (p. 76). This is important because as a realist researcher, I am interested in more than the experiences and beliefs of the participants. Through this research, I sought to understand the socially constructed causal mechanisms that often operate outside of the conscious awareness of the participants. These mechanisms "are to some extent known by participants... and partially (and often implicitly) acknowledged in reflective commentary on their circumstances" (Akroyd, 2004, p. 154). Throughout all interactions with participants and the transcripts of the data, I sought to uncover such mechanisms.

Research based on realist ontology seeks to understand reality through identifying causal mechanisms and exploring their interactional relationships to bring about an outcome within a context (Pawson, 1996). Because of the complexity and depth of causal mechanisms, they cannot be simply observed by a researcher of informants; rather, they are inferred using "retroduction." Induction and deduction are forms of inference that are concerned about moving from the particular to the general and vice versa. Retroduction involves moving from the specific outcome that is of interest (in this study, engagement with strategic change) to a "conception of a different kind of thing (power, mechanism) that could have generated the given phenomenon" (Lawson, 2004, p. 236). I used "retroductive thinking" to tease out variations in context between the departments as well as causal powers and mechanisms from the data.

Additionally, I deliberately applied alternative lenses as I sought evidence of contextual nuances, institutional logics or cultural ideations, and structural mechanisms in the data. Using the rich research literature based on the realist ontology, I used metaphor to aid in gaining insights into the participants' experience. For example, Moren and Blom's (2003) research exploring mechanisms at play in interventions in social work practice provided a metaphor for exploring mechanisms in a strategic change initiative in higher education practice.

The use of "mini" cases—examining three departmental contexts—allowed me to use the "contrastive approach" (Taylor & Bain, 2004) and tease out structural and cultural mechanisms and institutional logics by contrasting and comparing one department with another. By asking, "What is different in the departmental culture and context of the business programs as contrasted with the health or hospitality programs?", I was able to more fully understand both what mechanisms were activated and the relationships between them. Moren and Blom (2003) support investigations of specific cases that when analyzed collectively could inform theoretical models that reach beyond a single case.

Trustworthiness

In qualitative realist research, an alternative term for "validity" is trustworthiness (Guba, 1981). In a qualitative study, the researcher seeks to understand the subjective and multiple truths of the participants. As such, external validity is not an issue because the researcher does not seek data to form generalizations; rather, the researcher seeks cases where the understanding resulting from the study is transferable to other cases. Similarly, internal validity becomes an issue of credibility: the degree to which the researcher's interpretations mirror the participants' reality. Other components to address trustworthiness include dependability and confirmability. These are addressed in the following section.

Credibility

Credibility is the degree to which the researcher's interpretations of the data are isomorphic to the perceptions of the participants. Data were validated with participants at multiple steps throughout the study: upon completion of the transcription of the interviews, during the focus group through discussion and writing, and through participants contrasting their experiences with those of others through the Validation Document used in the focus group. Throughout the time of this research, I sought "out and interact[ed] with other professionals who are able and willing to perform the debriefing function" (Guba, 1981, p. 84). My perceptions and

insights were vetted with professionals in the research site who are not directly involved in the research but have familiarity with the context of the research.

Transferability

In case study research, "particularity competes with the search for generalizability" (Stake, 2000, p. 439) and the transferability of learning from one context to another. The concept of generalization in realism "differs radically from that espoused by positivists" (Harrison & Easton, 2004, p. 195) in that the identification of even one "deep" explanation in one instance can contribute to theory. I paraphrase Erickson as quoted in Merriam (1988, p. 176): "Each instance of a [change] is seen as its own unique [change], which nonetheless displays universal properties of [change]. These properties are manifested in the concrete, however, not in the abstract." So, although this research was a particular case of one strategic implementation of change in a single college, my findings display structural, cultural, and agential mechanisms of change that have the potential to assist leaders of change in other contexts but are most applicable to strategic change in higher education institutions.

Also, because this research consists of embedded "mini" cases in the examination of three different academic departments, a form of cross case analysis (Yin, 1981) occurred as the experiences of the departments were contrasted with each other. This provides readers of this research the opportunity to better find parallels in their own organizations and support insights into applicability to their contexts. Utilization value is a component of transferability (Smaling, 2003).

Dependability

In this study, dependability was addressed through the organization of the data collection to create and maintain an audit trail throughout the process. The data analysis process was validated with another critical realist researcher to confirm that the process of creating causal configurations for each of the departments in this study was an appropriate process. All data in the analysis can be tracked to the individual participant who reported the item.

Confirmability

Confirmability is the extent to which the interpretations of the data are free of researcher bias. Thus, it is important to consider the role of the researcher and any potential bias or influence the researcher brings to bear on the study. I was a prominent individual in the implementation of the strategic change initiative that bounds this study. I consciously controlled my personal perspective on the value of the strategic change initiative and tried to set it aside as I investigated the varying levels of differing engagement with its implementation by departments at the college. "One barrier to credible qualitative findings stem from the suspicion that the analyst has shaped findings according to predispositions and biases" (Patton, 2002, p. 553). Throughout this research, I have attempted to make my biases and assumptions transparent by identifying them and addressing them appropriately. I made every effort to validate my own perceptions with other informed professionals who were participants in the strategic change initiative to ensure that I was not "coloring" the data.

Further, in all interactions with participants, I deliberately adopted the stance of needing to understand the participants' experience, not judge it; I took the stance of a learner about change, not an evaluator of participants' change activities. This enhanced the likelihood that participants would freely share their experiences. Further, although I was tasked with leading the implementation of the modularization initiative, they did not see me as the originator of the change as participants recognized that the activity was clearly owned by the vice-president academic of LEC. "The only thing I ever heard, it [the modularization activity] was the academic vice-president's brainchild" (Participant). Thus, together the interviewee and I could seek to understand the nature of the implementation.

Triangulation

I have engaged in several forms of triangulation in this study to enhance its trustworthiness. I gathered data from participants through interviews, focus group discussions, validation writing, and reflective writing. With four sources of participant data, I was able to

"check out the consistency of findings generated by different data collection methods" (Patton, 2002, p. 556).

Using participant validation checks throughout the data gathering, analysis, and presentation components of the research project is

> ...another approach to analytical triangulation. Researchers... can learn a great deal about the accuracy, completeness, fairness, and perceived validity of their data analysis by having the people described in that analysis react to what is described and concluded (Patton 2002, p. 560)

Guba (1981) states that "member checks is the single most important action inquirers can take...Inquirers ought to be able to document both having made such checks as well as the ways in which the inquiry was altered as a result of member feedback" (p. 85). This documentation was maintained.

An additional form of triangulation is "theory triangulation" (Stake, 1995). Through the use of "co-observers, panellists, or reviewers from alternative theoretical viewpoints" (p. 113), a researcher can confirm that a description of research findings is plausible. I have used former colleagues at LEC, academic peers, and the members of my dissertation committee to gain alternative theoretical viewpoints. The feedback from these colleagues led to my consideration of the mechanisms operating in the post-secondary educational field and the issues of power structures in the college addressed in Chapters IV and VII respectively.

Ethical Considerations

The design of this research study complied with all of the guidelines for ethical research from the University of Alberta and was approved by the Research Ethics Board of the Faculties of Education and Extension at the University of Alberta. The purpose of this research was explained to all the participants at several junctures in the research. In securing permission to engage in this research at the college, I prepared a document outlining the research protocol and the purpose of the research and reassured college administration of the integrity of the research and adherence to ethical protocols. Participants were given a copy of that document so that they were fully aware of the agreement between me as researcher and Leading Edge College.

Participants were informed that they could withdraw from the research at any time without explanation. Each participant signed the consent form acknowledging his or her understanding of the research study and agreeing to audiotaped interviews and attendance at a focus group that would include reflective writing and validation of summaries of the interview data.

Every effort has been made to assure the anonymity of the participants and the college research site. Only information directly relating to the study has been retained in written or oral records. Interview data were transcribed with all names, titles, locations, and other identifying characteristics removed. Participants' names were coded to an alphanumeric system and all materials were labelled in this way to protect from accidentally revealing participant information. The researcher and the individual who transcribed the interview data were the only people who knew individual participants' data. The transcriber was required to sign a form indicating her intention to honour the conditions of confidentiality.

Chapter Summary

This chapter outlined the research design and methodology used for this study and how these align with critical realist ontology. This chapter provided a description of the process of gaining permission from the cooperating college; outlined the selection of the participants; overviewed the analytic steps, addressed trustworthiness, and concluded with a discussion of ethical considerations. In the next chapter, I give a brief overview of the case that is the focus of this dissertation.

CHAPTER IV: THE CASE

In this chapter, I describe the external environment of the case. Following, I discuss a number of broader environmental and college level components that were operating during the study but were not directly addressed in the analysis. I then provide a description of the case. The case description outlines the strategic initiative that is the change implementation in this study. An overview of the software application used in the change implementation that was instrumental in the implementation process is followed by an outline of the impact of college history and comment on departmental contexts.

The External Environment of the Case

The 1990s brought many challenges to the tertiary education sector in Alberta. With the reduction of revenue to provincial coffers due to dropping oil prices and continued funding pressures from the public sector, the provincial government chose to significantly reduce funding to post-secondary institutions (Barnetson & Boberg, 2000; Jones, Shanahan, & Goyan, 2002; Harrower, 2000).

As Tierney observed for the US context, "Governments in general are less able and less willing to pay for public higher education in a manner akin to what took place throughout the 1970s" (Tierney, 1999, p. 4). For many institutions, funding has fallen behind actual costs, and institutions are struggling to develop capacity within their organizations to address fiscal challenges. Alberta witnessed large budget reductions in 1994 which resulted in increased contractual workload limits for faculty (Barnetson & Boberg, 2000). Consequently, workload was a constant issue at Leading Edge College. As institutions struggled with funding and workload issues, much hope was placed in the e-learning movement to generate income. A recent report funded by the Canadian Council on Learning named "economic competitiveness" as one of the four major reasons for an educational institution to choose to institute an e-learning program (Abrami, et al., 2006).

In addition, there is continued pressure on educational institutions to re-examine traditional practice in addressing the learning needs of students. Whereas the "job-ready" skills-development approach to teaching and learning has served colleges well and will continue to form a large part of institutional culture, colleges need to prepare students for an economy that demands their continued professional development through life-long learning. "Colleges and universities also will need to transform what they teach and how they teach in order to meet the needs of a dramatically reconfigured workplace" (Tierney, 1999, p. 7). Colleges need to not only teach the skills of a given career but also ensure students have developed skills necessary for lifelong learning. For the post-secondary sector to remain relevant to industry and competitive with other learning providers, a systematic updating of teaching and learning processes is warranted. In many ways, these changes will strike at the heart of the culture of higher education.

Learners and other stakeholders have increasing expectations of the educational environment. Students are technologically astute and have high expectations of the use of technology in their studies at the post-secondary level. Students are demanding an alternative approach to the traditional delivery method; industries are interested in online learning to meet the training needs of their employees. Along with the demand for life-long learning comes the demand for colleges to meet learners' schedules and needs. "Virtual universities [and] entire degree programs awarded through distance learning...create a dramatically different framework" for higher education (Tierney, 1999, p. 104). Most institutions are rushing to address this expectation, but from an institute-wide perspective, the implementation of online learning opportunities in academic departments is generally inconsistent at best and chaotic at worst.

Post-secondary institutes are challenged by the pace of change in the roles of workers in society. Technological innovation in business, industry in particular and society in general, is taxing the tertiary educational sector's capacity to respond with relevant curriculum. "The process of curriculum development and redesign is often left to individual instructors who admirably endeavor to teach, maintain currency in their disciplinary fields, and redevelop curriculum. This process taxes individuals and requires more time and effort than is often available" (Zabudsky, Coe, Semchuk, Soetaert, & Barber, 2000, p. 2).

All of these factors have led to an interest by the Alberta government in managing the tertiary education sector through the use of managerialist strategies including Key Performance Indicators (KPIs) (Barnes, 2003). "Legislatures... call for greater accountability from colleges. Funding will increasingly be tied in some way to performance indicators" (Johnson & Carney, 2000, p. 279). KPIs are structured to encourage growth of the post-secondary educational sector to provide graduates in response to needs of the economy. For example, there are incentives to meet the needs of the high-tech communications sector. KPIs also address the issue of "quality" of institutions by examining "graduate to enrolment" ratios and "student satisfaction with instruction" indicators. An individual institution's funding was dependent on meeting the government's targets set for the KPIs. In response, post-secondary educational institutions have sought creative ways to meet the government's targets. Guided in part by the recommendations in the Alberta Education Report called "Meeting the Challenge" published as a result of provincial roundtable meetings, educational institutions at all levels began "expanding the use of technology [and] exploring new ways to provide classroom instruction" (Taylor, 2001, p. 84).

Discussion of Broader Level Mechanisms

Throughout the duration of this study, many activities operated in the broader environment at an institutional and field level that impacted the activities in LEC but were not foci of the study. The activities of the government and other institutions in the post-secondary field quite logically prompted the decision of the upper management at LEC to engage the college in the modularization initiative. However, these broader level mechanisms were not a foci for this study as their effects were rarely felt at the departmental faculty level and would not have a major effect on faculty's decision to engage (or not) with the modularization initiative. Critical realism recognizes the stratified nature of reality. As such, the mechanisms operating at the broad institutional field stratum would be largely unconsidered at the individual departmental member stratum. Additionally, these broader level mechanisms were largely experienced similarly across the departments and would therefore have limited explanatory value for the differences in the

outcomes of the departments. This section of the study articulates and recognizes some of the broader level mechanisms operating at the time of this study.

College Sector Institutional Field Mechanisms

Leading Edge College's activities are influenced by the activities of other institutions in the post-secondary institutional field. Several years prior to the initiation of the modularization project at LEC, a rival college embarked on an institute-wide modularization initiative. This initiative gave the rival college a perceived competitive advantage in its marketing of programs and its ability to customize programs to industry demands. The mechanism of isomorphism was acting to push LEC to engage in a similar initiative to overcome a perceived disadvantage.

At the same time as the modularization initiative was announced at LEC, the government department of Alberta Learning was emphasizing the need for access to education as part of the Key Performance Indicators (KPIs) (Barnes, 2003). As a result, there was a lot of interest among the academic vice-presidents of the colleges about the ability of e-learning to expand access. A collaboration of the college academic vice-presidents resulted in the formation of eCampusAlberta. The mandate of eCampusAlberta is to provide learner access to online courses. Each of the fifteen member institutions develops, contributes, and offers its respective online courses but also offers other member institutions' courses (About Us, eCampusAlberta Website). Interest in the activities of eCampusAlberta led to heightened awareness of the online modality for offering courses, and this awareness operated differently in the three departments. In the Department of Health Programs (DHP), there was a sense that the modularization project and the supporting software application provided a system to deliver learning digitally. In the Business department, faculty members' fear of losing their jobs and fear of the "unknown" of e-learning caused resistance to the modularization project. DHosP saw e-learning as an opportunity for their future delivery of curriculum.

As eCampusAlberta's systems and processes were put into place and competing colleges began to offer their courses online through eCampusAlberta, isomorphic forces and mechanisms came into play to push LEC to investigate distance and online learning and to

conform to the activities of other colleges by marketing courses through eCampusAlberta. This again had an effect on the modularization project as senior administration looked to the outcomes of the project for courses that could be easily adapted to "go online".

The pressure to provide course curriculum digitally was not limited to delivering courses to students at a distance but also to freeing up space in the existing physical plant of LEC. A strategy to increase access to meet KPI pressures without additional physical space is to have learners access the didactic content of their courses online and only visit the physical classroom periodically to meet outcomes that require hands-on or face-to-face interaction. Thus learners could be in a three-credit course but physically attend LEC only one hour per week, taking the remainder of their learning online. This pressure was brought to bear on the modularization project as deans and other senior administration sought models to reduce the need for students to physically attend the campus. An implication of this pressure was that more content should be included in the modules to facilitate student learning at a distance which triggered concerns over intellectual property rights.

Additionally, LEC was not immune to the larger forces working in tertiary education toward the marketization and commodification of education (Barnes, 2003). As such, the modularization project was seen as a mechanism to provide learning products that could be assembled and reassembled to customize courses and training events to meet industry demands with short timelines. LEC was responding to the forces of economic globalization (Levin, 2001, 2002, 2003a, Levin, Kater & Wagoner, 2006).

All of these mechanisms in the broader macro context of LEC influenced the modularization project through mechanisms such as the senior administration's reasoning for embarking on the project, modularization team members' design of components of the implementation, and faculty responses to the project.

The College and Institutional Field

At the time of this study, Leading Edge College was one of seventeen publicly funded colleges and technical institutes operating in Alberta's post-secondary sector (Post-Secondary

Institutions, Alberta Advanced Education Website). For the purposes of this study, the college sector is considered to be comprised of these institutions as their structures, mandates and programming are similar and government policy statements treat them as a sector. Each of the colleges is governed by a public board with an academic council that makes recommendations and submits reports to the board (Jones, 1997). The academic council structure provides an advisory role to the college president, its chief executive officer (Skolnik, 2003). However, the college sector academic council does not perform the same function as a university senate. There is no shared governance in community colleges in Canada (Levin, 2000, Levin, Kater & Wagoner, 2006), and until recently, the legislation in the province of Alberta did not provide any ability for boards to delegate or share authority with faculty. Changes in the Post-secondary Learning Act made in the fall of 2006 allow institutions in the college sector to choose their academic decision-making structure (Government of Alberta, 2006). The college sector, in part because of the governance structure limiting the role of faculty, has tended to adopt a top-down, bureaucratic managerial style as compared to the university sector with its shared governance model (Levin, 2001; Levin, et al, 2006; Deem, 1998).

The college sector offers occupational programs in diverse areas with a focus on technology and business (Skolnik, 2003). Most programming is in fields where there is no largely corresponding university program. Institutions in this sector generally offer developmental education, customized training for employers, and portions of apprenticeship and trades training (Skolnik, 2003). Some institutions in this sector offer university transfer programming and most recently, the opportunity to offer baccalaureate and applied degree programs (Government of Alberta, 2007).

Leading Edge College offers a wide range of programming including academic upgrading; full time programs in the areas of construction, electrical and electronics, mechanical and manufacturing, environmental management, business, health, hospitality, and media and information technology; and apprenticeship and trades training organized in nine departments. The college maintains a local orientation by maintaining community members of its governing board and by ensuring that every program offered consults a program advisory committee. The

espoused mandate of the college is to provide skilled graduates to fulfill the workforce needs of employers to support Alberta's businesses and industries. The college clearly prides itself on its economic market orientation of contributing to the economic well-being of the province.

The Strategic Initiative

In 1997, Leading Edge College engaged a new president. Having a focus on student success and a love of technology, this president began his tenure at LEC by engaging the college members in conversations about their views of the strengths, weaknesses, opportunities, and threats that would impact the college of the next decade. As a result of these conversations, a strategic visioning team was struck and through engagement with the college community, vision and mission statements, guiding principles, and key directions were created.

The vision and mission statements had key features of an outstanding post-secondary institution with a commitment on "student success" in a "global economy" using "applied education." LEC's key directions for the next decade included "champion student success," "excel in teaching and learning," and "optimize the use of technology."

Subsequent to the visioning activity, a new academic vice-president was hired who had a strong interest in "modularizing" curriculum. The vice-president described modules as digital documents that were like an "expanded syllabus" that outline outcomes and provide descriptions of activities for students including the appropriate sections in textbooks to be read and assignments to be completed. The benefits of a modularized curriculum for the college were that instructors could update the curriculum with minimal effort and students could use the modules to better manage their learning. The modularization initiative for Leading Edge College was a personal project for the academic vice-president that was in alignment with the "excel in teaching and learning" key direction. Additionally, the vice-president academic felt that the creation of the modules could aid the business development of the college through a routinized methodology of storing, maintaining, and standardizing the college's curricula. The resultant curriculum stored in a digital database would be available to all departments of the college for customization to their needs. In turn, a new position was created, the Dean of Technology and Curriculum. The new

Dean was charged with the responsibility of meeting the goal of the modularization initiative, which was to have all of the college's curricula modularized and captured in a database within three years.

The modularization team that the new Dean assembled consisted of individuals with experience in curriculum and innovation. This team identified early the need for tools to enable faculty to meet the very short timeframe for the modularization initiative. In alignment with the "optimize the use of technology" key direction, a software application was developed at LEC to aid the modularization initiative.

For the next three years, the faculty engaged in rethinking curricula, moving from a topical-based to an outcomes-based structure. Faculty "chunked" the curriculum into relatively small units based on the outcome to be achieved. The modules were then assembled into courses for delivery to the students in print or digital formats for face-to-face or online instruction. All of these tasks were enabled by a web-based application.

The Software Application

The design of the software application is an important consideration in this study because it incorporated characteristics based on institutional logics espoused by LEC that were potentially in opposition to institutional logics held by academic departments. Table 11 summarizes some of these characteristics.

Table 11. Software Application Embedded Institutional Logics

Application Characteristic	Embedded Institutional Logic	Alternate Institutional Logic
Curricula housed in college database	Curricula Belong to the College	Curricula are Academic's Intellectual Property
Use of outcomes-based language focused on learner abilities	Learning	Instructional
Editorial access by department members to all modules	Collaborative Department Management of Curricula	Curricula Academic's Intellectual Property
Viewing and copying access to all modules by all college members including the business development unit	Collaborative College Access to Curricula	Department Held Curricula
Ability to generate reports on departmental progress with modularization	Accountability for Results	Collegial Trust of Professionalism of Faculty

Impact of College History and Accountability Measures on the Project

This study examines the modularization initiative at LEC as a case of top-down strategic change. In the history of the college, this was the third college-wide initiative. In the first initiative, in the mid-1980s, the academic vice-president mandated that all courses would have a course outline that met a prescribed format. There was a lot of turmoil and resistance by instructors and departments, but in time, all complied.

In the second initiative, in the early-1990s, the former president implemented a college-wide Total Quality Management (TQM) initiative—characteristic of the implementation of management principles into higher education. The perceived failure of the application of TQM principles in the college was due, in large part, to both active and passive resistance by some departments of the college. Many remnants of the principles of that initiative were still evident in the college such as the use of teams, creating charters, using assessment to guide practice, and

meeting structures and norms. However, the perception by the college community was that "TQM failed." As a result, there is a strong belief, shared by many in the college, that if a top-down strategic initiative (as the TQM initiative was) is ignored long enough, it will simply "go away" and work continues as it always has. This previous experience with a perceived failed change initiative might explain why, during the early "storming" stages of the modularization project implementation, many members of the college community adopted an "ignore it and it will go away" attitude to the project.

The modularization project team was well aware of these perceptions and worked with the upper administration to set staged targets. These targets were designed to keep departments on track with the work required to enable completion by the end of the project timeline. To support the meeting of those targets, reports were created by the modularization software application to monitor the rate of completion of the project. For many departments, the first time they gave the project serious attention was when it was reported that they had not met the project targets at the end of the initial reporting. The use of the software application for reporting departmental progress is an example of managerial strategies at work in a higher education context.

Departmental Contexts

Hired for subject matter expertise, the faculty of the college generally have limited formal education in educational philosophies, theories, and practice. A pre service requirement is the successful completion of a three week, intensive training experience which gives instructors an overview of adult learning principles, the Kolb experiential learning model (1983), lesson planning, curriculum design, and classroom management. Although this training experience emphasizes experiential learning and the role of the instructor as a guide and facilitator of learning, instructors generally teach the way they have been taught, with little reflection on instructional practice. Reinforcing this practice is the new instructors' reliance on colleagues to assist them in their early days of teaching by providing a practical role model. As a result, teaching practice and logic vary departmentally across the college.

The college faculty is organized into departments, each with a dean and a team of department heads. These departmental groups have marked structural and cultural differences. For the purposes of this study, three departments were selected: Department of Health Programs, Department of Business Programs, and Department of Hospitality Programs. Each of the three departments provides a different context in which to examine the interplay of mechanisms during the implementation of strategic change. The following chapter provides further discussion of the contexts, structures, and institutional logics of each of the departments.

CHAPTER V: THEMATIC CONTEXTS AND MECHANISMS

Introduction

The next two chapters present the data gathered during this study and are interpreted using the theoretical frameworks presented in Chapter II. Combining Pawson and Tilley's (1995) context, mechanism, outcome (CMO) model and Archer's (1995) morphogenetic approach results in an expanded CMO model that recognizes cultural system components as having mechanisms distinct from structural mechanisms. In Chapter V, I outline the thematic contextual elements, social structures, and cultural system components operating in this study and, on the basis of illustrations of emergent powers and mechanisms operationalized in the three departments, describe how their characters differed. It is important to note that Pawson and Tilley are evaluation researchers and their CMO model is designed to provide understanding of why a policy intervention—a strategic top-down change—is adopted, or not (Harrison & Easton, 2004, p. 200). As a result, the insights provided by the analysis of this study's data in a modified CMO model are evaluative from the perspective of explaining departmental mediation of top-down policy implementation.

Chapter VI presents the unique causal configurations (Fleetwood, 2004) of each of the departments. These unique causal configurations incorporate contextual elements, social structures, and cultural system components unique to each of the departments to provide a more in-depth understanding of the departmental agents' engagement with the change initiative. Additionally, because mechanisms emerge at different times as they are triggered by events (Archer, 1995; Sayer, 1992), a timeline is used to illustrate when mechanisms emerged and interacted to produce outcomes.

Thematic Contextual Elements, Social Structures, and Cultural System Components

In the analysis of this study's data, many contextual elements, structural and cultural powers, and mechanisms were identified. Most were set aside. Those that appeared to have similar effects across all of the departments were removed as foci of this study. Realist explanations focus on the elements seen to be the *real* processes at work (Hedstrom, 2005, p. 38). Because realist explanations are not deterministic (Taylor & Bain, 2004) and causal mechanisms operate in open systems, contextual *differences* are critically important. To facilitate foregrounding of the most powerful contextual elements, social structures, cultural components, and emergent mechanisms, others were recognized and set aside. These constituents of organizations that impact change have been recognized in the change literature and were also operating in this case; however, because they were *similarly* experienced by all the departments in this study, they do not fundamentally help to explain the *differences* between the engagements of the departments in the case in this study. Examples of those constituents whose powers were experienced as barriers and catalysts similarly across the departments and therefore were set aside include the organizational level constituents such as leadership activities of the senior executive; demographic characteristics such as age, gender, and educational background of the faculty; and communication, feedback, and accountability processes of the college. These discarded constituents are prominent in studies about strategic change in higher education such as Kezar and Eckel's (2002b) study that identified twenty strategies and sub-strategies supportive of strategic change. For example, Kezar and Eckel found that setting and holding people accountable for expected outcomes in a change implementation heightened the likelihood of positive results. Participants in this study similarly reported that accountability mechanisms operated in a similar way across all three departments. This finding, although interesting, did not aid in understanding the *differences* in change engagement across departments and was therefore set aside. Contrasting only the critical elements of the three departments' contexts, structures, cultures, and causal mechanisms allows for a fuller understanding of the causal

configurations and their effects (Harrison & Easton, 2004, p. 198). As previously outlined in Chapter Three, the critical elements were identified through the data provided during the focus group when participants completed the validation document and subsequently discussed the barriers and catalysts to departmental engagement with the modularization initiative. Through analysis of both the data contained in the validation document responses and the focus group discussion, departmental *differences* in experiences with change elements were identified. These became the focus of the analysis that follows.

In general, the critical contextual elements, social structures, and cultural system components identified in the data (Table 12) were thematically similar; however, the manifestation of their powers through differing mechanisms altered their unique character across the three departments. This was not unexpected given the interaction of emergent powers in the unique causal configurations for each department (Sayer, 1992).

Table 12. Elements and Structures

Contextual Elements	Social Structures	Cultural System Components
Change Culture	The Role of the Dean	Teaching and Learning Logic
Previous Industry Experience	Department Head Role in Strategic Change	Management Style of Department
Graduate Production Process	Technology Access for Curriculum Management	Ownership of Intellectual Property
Departmental Trust Level of Senior Administration	Training Opportunities and Support	Learning as Commodity
		Departmental Status Need

In the following sections, I more thoroughly describe each of the critical contextual elements, social structures, and cultural system components and their unique characters as they were manifested in each of the departments in this study.

Contextual Elements

The thematic contextual elements identified in this study as having marked effects on how the causal mechanisms interacted to create differing outcomes were the change culture of the departments, the previous industry experiences of the members of the departments, the nature of the process by which the departments produced graduates, and the level of trust departmental members had of senior executive administration. The character of each of the thematic contextual elements varied across the three departments. This character of a contextual element varies as it responds to the many influences upon it (Pawson & Tilley, 1998). For example, one of the contextual elements that would be part of the context for the outcome of an enjoyable day at the lake would be the character of the weather. The weather's character could manifest itself as "hot and sunny" or "cold and rainy" or many other variations on the theme of "weather." Similarly, the manifestations of the contextual elements in this study vary across departments. A summary of the variations of the contextual elements is provided in Table 13 followed by a fuller explanation.

Table 13. Departmental Contextual Elements

Contextual Elements	Health	Hospitality	Business
Change Culture	Hardy	Open	Resistant
Previous Industry Experience	Compliant with bureaucratic directions	Occupations create collective openness to change	Varied
Graduate Production Process	Mass production - craftwork blend	Craftswork	Mass production
Trust of Senior Administration	Moderate to high	High	Distrust

Change Culture of Department

The most pervasive contextual element across the three departments was the reported "change culture" of the department. In this study, the characterization of the change cultures across the three departments varied from "change resistant" to "change hardy" to "change open."

The Department of Business Programs (DBP) had a culture that resisted top-down, mandated change. When asked to describe the change culture of the Business department, one participant replied, "very much an older, conservative, status quo environment," and another responded, "Overall, it's fairly negative." This change resistant culture was due, in large part, to the department's history with a significant top-down implementation of a Total Quality Management (TQM) strategic initiative. A participant explained, "We saw this [TQM] thing, we put a lot of time in it and it went away. Okay. Now, [the modularization project] comes along. People are a little more skeptical." A second participant commented, "Well, what's the reinforcement for a change that's been imposed and failed? And how much have I invested in that change over time? My resources, my lost opportunities to do something that I really wanted to do? So does that barrier get higher over time? Maybe."

Over time, the DBP also adopted a stance of criticality towards senior executive administration's decisions: "Business people..., I would say they're one of those areas, perhaps, that likes to look critically at things" (Participant). The critical stance towards senior executive administrative decisions interacted heavily with the department's cultural logic of "professional authority" to reinforce and support the change resistant culture of the Business department. This is evidenced by a participant's explanation that the college has a "cultural thing as an organization that [LEC's executive] think that somebody else is doing it better and let's bring in the expert which in itself might be a bit of a slap on the face to the individuals that are expert and resident [in the Business department]." The logic of "professional authority" manifested as a proxy for the status needs of DBP. When participants invoked the rhetoric of professional authority, they were speaking of their need for status. The status need of DBP is explicated more thoroughly later in this chapter.

The Department of Health Programs' (DHP) participants reported a culture that was "change hardy" to top-down change. The Health department experience with the TQM strategic initiative was largely seen as positive. Although this department shared the experience of the TQM strategic initiative being implemented and then gradually fading from the forefront, the departmental members perceived this as a natural evolution. The DHP had actively used TQM principles and processes during a past restructuring of the department and, as a result, felt that "we learned a lot about change ourselves when we went through the [restructuring of the Health department] because we were taught a lot about change in the [TQM] process" (Participant). Many of the processes implemented at the time of the TQM movement in the college were still intact in the DHP including guidance, monitoring, and project team structures and communication processes such as team charters and retreats. The TQM history of the Health department contributed to a balanced, collegial, teamwork management style. The "change hardiness" of the department meant that "We had very few resisters to the [modularization] initiative and I believe that in part that was because of our [TQM] education in the mid-nineties" (Participant).

A climate of embracing and welcoming change was reported by the Department of Hospitality Programs (DHosP). "In our [department], we are people of change" (Participant). Participants could not give evidence of the effect that the TQM implementation at LEC had on their department but spoke about a history of a highly bureaucratic and controlling department head that resisted suggestions of innovation from departmental members. "It was practically a dictatorship in this [department]... the only change came from [the department head's] office. No other change was ever accepted, whether it was good or bad" (Participant). The controlling department head's replacement was welcomed by the department, and as he encouraged active participation in grassroots innovation, the department built a change open culture. Participants report that Hospitality department "staff has been really supportive" of change.

Previous studies on organizational culture and change have focused on the effects of discipline-specific culture in organizational change efforts (Tierney, 1989). However, I did not locate any studies on organizational change in higher education that categorized departmental cultures based on change or on the degree of openness to top-down change.

Previous Industry Experience

Research has shown that different personality types are drawn to different occupations (Kolb, 1981; Myers, 1993; Myers & Myers, 1995). Academic staff at LEC is required to have industry experience of the occupational set that comprises their department. The specific industry experience and skills provide a common background for the context of the academic department. These shared sets of industry-related experiences influences the department's collective response to events. A participant from the Hospitality department explains this relationship.

> It [engagement with change] depends, and speaking specifically at LEC, it depends what industry you came from... You see in Hospitality we come from an industry where we work 12 hours a day, six days a week, every holiday, every Christmas, every New Year's. Change is rapid. So we made time to think about change then and discuss with executive committees and share ideas and whatever.
>
> So we come to LEC, we say we just have all this time and we've always said that there's a lot of things to do at LEC, we're very busy, but we have the time to do it, and if you're paid to think [about change], you should take time and think. If that means going for a walk outside, or having a cup of coffee and thinking, that's productive time.

In DHosP, the character of the occupations from which the members of the department are selected create a collective openness to change.

The Health department members come from occupations that are highly standardized with routinized procedures that are often critical to the health of individual clients. The health care industry requires accuracy and compliance to authority-driven standards. Instructors in DHP are used to documenting the "right way" to do procedures and documenting activities once they are complete. Their occupations generally have national occupation standards: descriptions of the skills that they must have in their occupation. Thus, a description of a learning experience worded as a skill outcome is familiar and comfortable to them, and this is at the root of modularization. DHP is, "by its nature, highly detail orientated... It's the responsibility of these people to be profoundly detailed and profoundly accurate and for whatever reason they seemed to adopt the [modularization] process quicker and faster" (Participant) than other members of LEC. This industry background made the experience of modularizing curriculum based on

outcomes and documenting components of the teaching and learning process in modules a familiar experience. Members of the department come from occupations where they expect to take orders from their superiors. "Paramedics do have to make decisions—life and death decisions—but with limited knowledge. They take directions from a medical director. And then there's the vet, and then there's the Animal Health Technologists on staff that follow the vet" (Participant). Thus, because the members of DHP shared an assumption that members lower in the organizational hierarchy must comply with directives of senior administration, they were compliant with a top-down, directed, strategic change.

In the Business department, the faculty is hired from a wide variety of business-related occupations that are highly varied in their character. Commonly, these instructors have baccalaureate degrees in Business. Participants emphasized that they taught students about managing strategic change. This academic knowledge of managing strategic change was not cited in the data as facilitating the department's engagement with strategic change but rather characterized as the departmental member having a distrust of senior administration's ability to effectively implement strategic change: "We teach... how strategic change is developed, decided on, implemented and measured to see how it is successful. We do not see any of those practices being employed" by LEC.

Tierney's (1989) study of cultural politics and curriculum reform found that faculty departmental culture was oriented toward a disciplinary culture rather than an institutional culture. At LEC, participants in this study did not characterize the nature of the culture of departments so much on the *discipline* as on the industry-specific *experience* that departmental members brought to the departments. However, in identifying the finding of department members' experience having a unifying effect to the department, I was guided by the research of Becher and Trowler regarding academic tribes (2001). I found no studies that related to departmental members' previous industry experience relating to departmental culture.

Graduate "Production Process"

LEC has been characterized by its president as having been created to serve business and industry. This perspective is so strong that graduates are often characterized as the product

of the organization. "Industry is happy with the product we're producing" (Participant). The character of the "production process" of their graduates differs across the three departments.

The Business department mass produces graduates in that they have large numbers of sections of the same courses and students move through the progression of courses to graduate. "What really drives our activity is student bums in seats" (Participant). There are very large numbers of applicants for seats in the programs, and the department responds by providing many sections of each of the classes. "We're teaching upwards of twenty sections in a year of a single course" (Participant). Graduates have skill sets designed to meet the needs of many different occupations.

In contrast, the Hospitality department uses a "craftswork" mode to produce graduates; that is, small teams of instructors work closely to produce limited numbers of "custom-designed" graduates (Jones, Mills, Weatherbee, & Mills, 2006). DHosP prides itself on focusing on individual student success, instilling a strong work ethic in students, and producing graduates who are highly skilled culinarians with skill sets customized to individual occupational needs. "Our priority here is the student first" (Participant). This perspective pervades how curriculum is presented to students—highly customized and focused on student experiences.

> We continually win the student award points for volunteer work with the smallest department at LEC... That's what we instill in our students. That's why when our students go out there, they're prepared to work the longer days and the extra functions and the different things and get involved with their community. [It's all about] success of our graduates. (Participant)

The Department of Health Programs' perspective on their graduates is a mix of the two perspectives. The graduates of this department are also trained with highly customized skill sets depending on the occupation they are interested in. The department provides on-the-job practical and highly specialized lab experiences for students. A participant characterized the ideal view of the Health department this way: "To me it has to do with successful students, so, probably I would just like [others] to say that the [Department of Health Programs] produces students who are 100 percent successful on their [professional] exams. That would be my ideal." However, the DHP also has other pressures that modify this focus on distinctive training for students. The health services sector has experienced a huge growth in demand for services; subsequently,

DHP has experienced pressure to graduate more highly skilled workers than ever before. As a result, the department has been modifying the "craftswork" mentality with some aspects of "mass production" in offering a greater number of seats and restructuring curriculum to yield multiple section "core" courses common across program clusters.

The differing graduate "production process" contextual element relationship with the teaching and learning logic of the departments affected implementation either by amplifying or diminishing the power of the teaching and learning logic. From a critical realist perspective, the mass production context supports a knowledge transfer instructional logic while a craftswork context supports a constructivist, experiential learning logic. The "mass production of graduates" contextual element had tendencies in opposition to the tendencies of the software-embedded experiential learning logic of the modularization template. That is, departments who embraced the knowledge transfer learning logic would resist placing concepts, activities, and assignments in modules as this was viewed as undermining students' motivation to attend class to receive knowledge. In contrast, the craftswork production process had tendencies that magnified the tendencies of the experiential logic. Craftswork production assumes learning that is highly customized to the individual learner. Modules were seen as a vehicle to provide flexible, customized learning opportunities to students. This supports the experiential learning logic; instructors viewed students' attendance to be an opportunity to engage them in hands-on experiential learning or constructivist cognitive learning. As such, modularization was not seen as a threat to the teaching and learning process.

Departmental Trust of Senior Level Administration

Each of the three departments in the study characterized their level of trust of senior administration differently. The level of trust is a contextual element that results in events being viewed differently by the departments.

The Department of Business Programs exhibited a high level of distrust of the senior executive administration both in regard to their administrative managerial skills and their motives. The distrust of senior executive skill, knowledge, and ability to effectively implement strategic change has already been described in the "Previous Industry Experience" section, and reference

has been made to previous experience of DBP with the TQM initiative and skepticism about engaging in another strategic change generated by senior administration in the "Change Culture" section. Additionally, staff in DBP is highly skeptical of the veracity of messages from the executive regarding the modularization project. "What's their real reason for doing this?" a participant asked. "There was, I think, the allusion that we were never being told exactly the truth," a participant stated. "What ticks people off lots is if the administration plays games. People don't like people who play games; they don't like games being played. So if you're trying to convince me to participate or whatever and schmooze me, go away.... Why should you have secrets?" (Participant).

The Health department characterized their level of trust of senior executive as formerly strong but now somewhat compromised since the TQM initiative had seemed to lose its focus. "Based on a relatively positive experience of change before [the TQM initiative], there was still a certain level of trust within the [department]" (Participant). Messages from this department regarding trust of senior administration were mixed. One participant comments, "That's why it [the modularization initiative] made sense to me because [senior administration] gave me the big picture." While another indicates the department wasn't completely trusting.

> I often think when people think that the administration is playing games, it's just that the administration hasn't thought about the stakeholders and that it's not that they're playing games, it's they haven't thought it through and I don't know if that's just being naïve, but I guess it's all that matters if communication is viewed that way, then that's the way it is.

In contrast, the Department of Hospitality Programs was trusting of senior administration's people management skills. A participant speaks highly of the executive teams' style.

> There's no reason why a V.P. Academic cannot come down and talk to an instructor or a program head or anybody, and I use [the president] as a good example. You know, I walk down the hall and I see [the president] spending 10 minutes with one of the janitors talking about how they're cleaning the floor. You know, [the president]'s rolling up his sleeves and looking at the mops and stuff and I say, see, that's why I think he is a successful manager. [The president] has faults and [the president] has screw-ups—everybody does... But what I'm saying is that is an excellent style and [the president]'s team needs to manage the same way.

DHosP has respect for senior executive's ability to hire talented administrators that bring applicable knowledge to their portfolio. The department is also trusting of senior executive's motives for instituting a change initiative. In an interview, a participant emphasized trust as important in his department's response to strategic change.

> Q: When a strategic change comes down from on high, so to speak, the faculty trust that this is truly something that needs to be done and so even though they may be a bit reluctant and worried about workload and various issues like that, they're more willing to go along than maybe other areas at LEC, for example? (Researcher)
>
> A: Perfect. It's exactly that. It is, and I think the key word there was trust. (Participant)

As outlined in the previous chapter, the history of the college with the implementation of college-wide initiatives affected the departments' views of top-down strategic change. The departments of Health and Hospitality had generally experienced the top-down TQM initiative positively and tended to have a higher level of trust of the college administration's judgment of the change required and methods of implementation of that change. Some members of the Business department perceived that the TQM initiative had failed or was abandoned, and this may have affected the department's trust of senior administration's judgments and change methodologies.

Social Structures and Mechanisms

As noted earlier, critical realism recognizes that social systems are open and causation can be due to multiple mechanisms that are contingent on specific contexts (Archer, 1995). In the previous section, I identified the thematic contextual elements that had differing effects on the change engagement of the departments in this study. As Archer contends (1995) mechanisms at play in change causation can be a result of structural emergent powers or cultural emergent powers. As a result, mechanisms operating in the departmental contexts have been categorized as those resulting from social structures and cultural system components. The thematic social structures and mechanisms are described in this section, and the description of the thematic cultural system components will follow in the subsequent section.

Those social structures identified in this study as having marked effects on the change engagement outcome were the role of the dean of the department, the department heads' role in strategic change, the access to technology for the purpose of curriculum management, and training and support opportunities provided during the implementation of the modularization project. As with the contextual elements, the social structures and their mechanisms vary in their manifestation across departments. This is not unexpected as Hedstrom and Swedberg (1998) note that one of the key defining characteristics of mechanisms is that they perform the function of explaining how variables are related; in other words, how does a particular context relate to a particular outcome? Because of the subtle nuances of the processes that relate context(s) and outcome(s), mechanisms vary subtly in their manifestation. To continue the "day at the lake" example from the previous section, even when the contextual element of "weather" manifests itself as "hot and sunny" the social structure "family" can manifest itself with tension and irritation or with love and trust which would lead to largely different outcomes of enjoyment.

So too, social structures manifested their mechanisms and powers differently across the departments and these differences are summarized in Table 14 with a fuller explanation following.

Table 14. Departmental Social Structures

Social Structure	Health	Hospitality	Business
Role of the Dean	Compliant with initiative	Compliant with initiative	Mixed messages regarding initiative
Department Head Role in Strategic Change	Sense of efficacy high	Sense of efficacy high	Sense of efficacy low
Technology Access for Curriculum Management	Non-issue	New computers	Poor
Training Opportunities and Support	High use and provision of opportunities	High use and provision of opportunities	Training seen as a barrier – modified support strategies

The Role of the Dean

Each academic department at the college has a dean that is the link between senior administration and the departments. The dean straddles the strategic and the operational activities of the college as the senior executive team, in collaboration with the deans, determines strategic direction and activities for the college; the deans communicate and facilitate the implementation of the activities in the departments. Largely, the deans task department heads with achieving the goals set in the college business plan. The disposition of individual deans in their roles affects departments' views of every aspect of college life. Individual faculty members in departments are largely unaware of the effect that the dean has on their predisposition to believe certain things and act in certain ways, but the data in this study clearly illustrate this mechanism.

The Department of Health programs experienced a marked period of time without a dean being present. At the beginning of the implementation, the dean was on an extended leave due to health issues and there was a substantial period of time before the dean was replaced.

> When [the modularization project] hit, we had no dean of the [department]. We were without a dean for almost three years... so those were my stresses at the time. I know how you scramble and wander and that's not a good feeling (Participant).

The staff in DHP was often confused by the expectations of the implementation of the modularization project because "the conduit for information coming to [DHP] was broken" (Participant)—the structure was not operating. Staff often received communications late and had to scramble to meet deadlines. "I think what would probably happen is that sometimes the messages didn't get through, because there was no dean and then all of a sudden there'd be a one-week deadline" (Participant). The absence of a dean in the department impacted the outcome of engagement with the modularization project.

DHosP also initially had no dean for the department, but since the department had a very "change open" context, the department head(s) actively sought out information regarding the modularization project. "I wanted to lead the [modularization] project for Hospitality... I pick up the phone a lot [and call department] heads, managers, whomever" (Participant). The change

open context impacted how the structural power of the role of the dean was experienced. The new dean for DHosp was perceived to have an empowering management style. "I work on a very interesting level with my dean, where I keep her up to speed as to what is going on. I don't wait...for the dean to come tell me what to do" (Participant). As well, the DHosP dean was seen to support the modularization project. "Our dean... always supported the initiative and [is] excellent—[the dean] keeps... up to speed" (Participant).

In contrast, the dean of the Department of Business Programs was reported to have a bureaucratic and directive management style. "He [the dean] is of the old school of management that when it comes from the top and that's the way it is, then you will tell people that this is the way it will be done, you don't have to give them the reasons why or anything" (Participant). The mechanisms of control and power of the structure of the dean's role changed the character of the structure in the perceptions of faculty. Additionally, department heads in DBP received strong messages that indicated that the dean was not in agreement with the senior executive's process and goals of the modularization project. "I think he [the Dean] wasn't as on side with it [the modularization project] as others [other Deans]" (Participant). As a result, the management group of DHP received private negative messages and yet heard positive public messages about the strategic initiative. In private, a group consisting of the dean and some highly influential department heads with long tenure in the department had shared their concerns about the modularization project. These private conversations resulted in mixed messages to the department heads and resulted in "some incongruity based on the public messages that I heard from the dean" (Participant).

Department Head Role in Strategic Change

Across the three departments, there were variations in the department heads' perceptions of their ability to initiate, manage, and be successful with change initiatives. This sense of efficacy with respect to change management relates to contextual elements and other mechanisms within the departments but was clearly an important aspect for the participants of this study.

As might be expected, with a controlling and directive dean, department heads in the Business department were the most negative about their ability to control or manage change. Business DHs disagreed with the statement on the Validation Document regarding the ability of department heads to affect change implementation. Many of the Business department heads' comments use the phrase "just do it" meaning that they were responding to orders that were non-negotiable. In response to the question, "So you did not feel included in the thinking and/or planning around that project?" the response was "It was absolutely a straight 'do it,' period."

Both the departments of Hospitality and Health exhibited high confidence in their ability to manage and be successful with change initiatives. In DHP, a department head spoke of a top-down strategic change implementation.

> Last year when the message came down that this was the organizational goal or the approach to this change, I felt particularly in one program area that the stresses in that program area were just simply too great to absorb that and I made a personal choice and would be willing, very willing to be accountable for that, that I was not going to follow the total process, that I was going to follow a version of the process, so that I would slowly introduce that change to that group of people, and in fact, just based on a staff meeting this morning, was able to communicate that to them, the message that last year we didn't do the whole process because I didn't think you guys could, and now this year we're going to move into the process a little bit more.

Although both departments reported high confidence in their ability to engage appropriately with change, the Hospitality department reported being very proactive around change. The nuance between the two departments is that DHosP expresses a sense of its ability to initiate transformative change.

> The first week of September I gather the faculty together in two groups, in focus groups. We talk about change. We talk about vision. We talk about blue-sky thinking. We talk about operation core business and we document all of these tidbits. And from there we take them with the leadership team, we go on a retreat for a couple of days out into the country. We take all of those, all of what LEC has given us, require change, and we meld it into a Hospitality business plan.

Clearly, the three departments' leaders have differing perspectives on their role and ability to manage change within their departments, whether the change be that initiated by senior administration or change that is a result of changes in the environment of the college.

It is important to note that the mechanism of differing perceptions of self-efficacy around change management is operating in unique departmental contexts with differing levels of openness to change. The power of the mechanism of the department head's role in strategic change is interacting with the differing mechanism of the structure of the dean's role to create differing effects in the departments. The various contextual elements and structural mechanisms are beginning to show their interactions like strands in a tapestry. Two further structural mechanisms are interacting in this milieu: access to technology and training opportunities.

Technology Access for Curriculum Management

Although LEC prides itself on providing a highly sophisticated technical environment for students and staff, the extent to which technology was available was reported as a mechanism that affected departmental implementation of strategic change in this study.

All departments within LEC have autonomy and discretion with the spending of budget dollars allocated to the department. Historically, each program within the departments would determine what computer equipment they would purchase. As technology improved and became recognized as a requirement for instructors, the technology became standardized across the college, but departments still had discretion on when to upgrade computers to the standards. This resulted in uneven access to technology across the college departments.

The data show that participants in this study agreed that computer technology was experienced either as a barrier or a catalyst to engaging with the modularization project depending on the access faculty had to appropriate technology.

In the Department of Health Programs, computer technology access was not mentioned in the data. The tone of all of the data indicates that access to computer technology was not an issue and was below the level of consciousness of the participants. When asked about faculty interaction with computers with respect to the modularization initiative, participants referred to staff not being comfortable with the technology—not lack of access to the technology: "I think people really were frustrated with all this computer stuff because there's a few computer-phobes. But if there really was a problem with computer literacy, then they could find the help." This "lack

of access to technology" is an example of a structural power that wasn't activated in the context of DHP.

On the other hand, the Business department faculty experienced a lack of appropriate computer technology and so experienced computers as barriers when the machines on their desktops could not interact with the database technology designed to assist in the modularizing of curriculum. "We had people that did not have computers on their desktops that could actually do the work that they were being [asked] to do" (Participant). Additionally, DBP participants indicated that required training to gain a Personal Identification Number (PIN) to access the modularization application and database was a barrier to faculty accessing the modularization application and reduced their engagement with the strategic initiative.

In the Hospitality department, the lack of appropriate level technology that could have been experienced as a barrier was turned into a catalyst by actions of the department head despite budgetary concerns.

> Some of the things we did also that made a big difference is we identified that we should go out and purchase a new computer for our staff and just like many things around here where they say, well, where are you going to get that money? We did and we housed all the office with—well, it's around 15 new computers now, the current flat screen, state of the art computers... We just started setting up new computers in everybody's offices and they were so excited about these new computers they just needed to do something (Participant).

The structural power of access to technology was characterized by the mechanism of providing appropriate technology and presenting it like a gift to staff with the expectation that now they would have the opportunity to use the technology to do great things.

Training Opportunities and Support

During the implementation of the modularization initiative, a wide variety of training was provided to the staff of LEC. The training opportunities covered such topics as basic computer literacy training, writing objectives, managing curriculum in the modularization database, customizing modules, enhancing modules with media, etc. All staff were required to attend a minimum set of training events to receive a PIN (personal identification number) to access the modularization software application. The use of a PIN ensured security of the curriculum

database, and the required training ensured that all staff had the basic skills required to manage the software to avoid potential harm that could be done to the curriculum in the database.

Health faculty viewed modularization training as a professional growth opportunity and support for the modularization initiative. One Health department head commented that the modularization training was an opportunity to learn about curriculum development. Not only was the content of the training seen to be positive by DHP, but the way it was offered was perceived positively: "I think the way [modularization] training was available to staff -- many, many times, many ways, that was very good" (Participant). Additionally, DHP accessed members of the modularization team to provide one-on-one training and support.

> When things got a little off track I would just have one of the [modularization team] come to a staff meeting and they asked the questions, "How are things going? Is anybody having any problems? Where are you? Tell me about your [modules]. Tell me about your experiences..." That helped quite a bit. (Participant)

As well, a participant recalls "There were some arrangements made that [an instructor] would work with the [modularization] people two days a week; he would physically be beside somebody there two days a week." DHP also accessed funding available from the modularization initiative to hire a resource to help faculty with modularization activities. As faculty began to engage with the initiative and felt inadequate to the task, access to a modularization expert provided by the DHP department heads was a supportive mechanism for the staff. "Then I needed somebody at the program level that worked well and we had hired extra help and then there was help available through (the modularization team), which was wonderful" (Participant). These additional resources, when recruited, liaised heavily with the modularization team to ensure that they were helping faculty to modularize the curriculum to the standards set by LEC.

DHosP used training to support and encourage instructors to modularize curriculum. But even more importantly, the DHosP department heads' overt support of training for instructors was a public statement of their support for the initiative.

> People knew that I was accurate and I didn't... fool around. We would do planning and... we have these huge checklists and these accomplishment goals for staff that are operational... So, the staff member comes in and we'd be reviewing this and I would say, okay, are you confident that you're going to go into [the software application], and are you confident to go into

> this [modularization] project? Are you trained? Do you feel good? Oh, yeah, I feel great. Okay. Go into [the software application] and show me around... When they would say, I don't know my PIN [Personal Identification Number] number, I said, If you don't know your PIN number or password you haven't been to [the software application] enough and you're not ready. So let's go to in-service and I would go [with them] and they would take all their training again. (Participant)

Attending training with a staff member was public support for the individual and a way of showing that even the department head needed to attend training more than once. In that way, attending training multiple times to gain comfort with the processes was viewed positively by the faculty. This was critically important for DHosP because their typical instructor had extremely limited formal training in curriculum development and management. Like DHP, DHosP also made full use of consultation and support services of the modularization team to the extent that they hired their own full time consultant away from the centralized modularization team to work exclusively with their staff providing training and support.

> I'm going to... hire this person for one year—a full-time staff [member] who will sit in this office and help the staff modularize, understand [modularization]. She's not here to do it for them essentially. She's here to educate the staff on how to do this properly, and that's what happened, and we just took it on our own. (Participant)

In the Business department, the need to take training to gain access to the curriculum database was seen by some as an insult to faculty. Yet others found "when we had troubles we could call somebody and get an answer or whatever. There were courses that were available that fit our time slots and things like that" (Participant). One of the strategies implemented by department heads to alleviate the requirement of faculty accessing training to receive a Personal Identification Number (PIN) was to train their administrative support to do the entry for instructors. "We had our admin... [take modularization training] and she did a lot of the inputting for us, but I still know how to do it and can get in... but she was excellent. So to have that kind of backup as well took some of the pressure off." The mechanism around training and support in the Business department was vastly different from that of DHP and DHosP, perhaps because departmental leaders did not agree with the processes and goals of the modularization project and, as a result, were not willing to dedicate resources.

Cultural System Components and Mechanisms

As identified by Archer (1995), cultural system components have emergent mechanisms and powers that can be identified and analyzed in a similar manner as structural mechanisms. The thematic cultural components and mechanisms identified in this study as having marked effects on the change engagement outcome were the teaching and learning logic employed by departments, the management style of the department, the stance on ownership of intellectual property, the learning as commodity logic, and the departmental need for status. As with contextual elements and social structures, the character of the cultural system components varied across the departments of this study. To again extend the example of a day at the lake to illustrate a cultural system component that has varied character, let us add that the day at the lake is during a cultural holiday that celebrates the "birthday" of a nation. A cultural mechanism of celebrating the holiday could vary from the display of fireworks and flags to no overt recognition at all. Such variations on the cultural system component of celebrating a national holiday could lead to a similar (or differing) outcome of enjoyment of a day at the lake.

Variations of the cultural system components are summarized in Table 15 with a fuller explanation following.

Table 15. Departmental Cultural System Components

Cultural Component	Health	Hospitality	Business
Teaching and Learning Logic	Mixed	Experiential Learning	Didactic Instruction
Management Style	Collegial	Collegial	Authoritarian
Ownership of Intellectual Property	Corporate	Corporate	Faculty
Learning as Commodity	No data	Supported and encouraged	Rhetoric of support but resistant
Status Need	Low - Unthreatened	High	High

Teaching and Learning Logics

As described in Chapter II, competing logics about teaching and learning exist in higher education. These logics are based on different ontologies that have differing views about the nature of knowledge and how people learn. In the traditional "instructional" logic, the instructor holds the knowledge of the "way things are," and, as the expert, transfers that knowledge to students through lecture. The competing "learning" logic holds that knowledge is constructed by the learners through a variety of experiences that are somewhat unique to the learner—experiential learning. In this study, data support the idea that differing teaching and learning logics across the departments were operating as cultural powers to affect the outcome of change engagement with the modularization initiative.

Supported by the "mass production of graduates" contextual element, the Department of Business Programs supports the instructional logic.

> We have a phenomena here because, in the [Department] of Business, the stuff we teach... it's not like technically... it's a little bit more academic so students don't have to be in class." (They can get the information from the text.) (Participant)

Because the instructors have a traditional instructional paradigm—that of the lecture process imparting knowledge to the students—the process of modularization that included content in the modules threatened them.

> We're going through a big debate right now [in DBP] and over the past year in our [department] there has been a growing dissatisfaction with a real spurt in lack of student attendance in class or perceived spurt in this past year and some people, upon questioning students reflecting on what they had to say about well, why come to class when this is all available elsewhere? And that's leading individual instructors to question the value of putting [curriculum] into a [module]. (Participant)

DBP instructors were supportive of standardized curriculum to the extent of agreement on the outcomes of a particular unit of study. However, because of the assumption inherent in the instructional paradigm that knowledge resides with the instructor, faculty were reluctant to provide even the simplest information about where particular content might be found in a text or descriptions of what kinds of activities and assignments students should engage in to aid their learning. DBP instructors' instructional paradigm assumptions about the nature of teaching and

learning and the roles of instructors and students led to their providing information about curricular content and activities verbally to students during the classroom experience rather than providing it to students in modular format. Students having ready access to information about curricular content and suggested activities and assignments would move the control of the teaching and learning experience from the instructor to the student in contravention of assumptions of the instructional paradigm.

Additionally, it is not a large step from modularized curriculum that is stored in a database to offering that curriculum online through a learning management system like WebCT. In DBP, instructors were encouraged to consider using WebCT to support face-to-face instruction. This contextual element, in interaction with the digital nature of the modularization initiative, led to a fearful response by some of the staff in DBP. "Many people are afraid that we're going to put it [curriculum] online and then you're not going to need instructors anymore" (Participant).

The Department of Health Programs faculty was not threatened by the concept of moving to an online curriculum because they saw this as an opportunity to serve more students in response to the contextual element of increased demand for health-related training. Through online learning, the Health department could deliver training to students at a distance without increasing the face-to-face enrolment at the college. Space constraints in the physical plant of LEC set limits on the number of students who could be physically present at the college.

The teaching and learning logic in DHP is mixed because programs comprise both didactic and clinical training experiences. In the context of didactic training, the lecture methodology might indeed be the best approach while the clinical courses use experiential learning strategies. Faculty in DHP recognized that "in this strategic change thing that's happening at [LEC], buried in all this... is a real critical point, and that is... the role of the learner is changing and the role of the provider of learning opportunities is changing" (Participant).

The Hospitality department's strong "learning logic" was evidenced by participants commenting that "there are lots of other ways to learn" than classroom-based learning. DHosP took pride in providing training for students in unique ways. "We do more volunteer work and more community based work than any other [department] at LEC" (Participant). One participant

proudly declared "I am firm believer in experiential learning, absolutely." Because the modularization template embedded in the modularization software application was structured to support experiential learning, alignment between the learning paradigm espoused by DHosP and the software encouraged DHosP's engagement with the modularization initiative. Through modules, many suggested activities could be provided to students who could select which activities might supplement their learning in addition to what their instructor might require. DHosP supported students taking more control of their own learning through such opportunities.

Additionally, the modularization and digitization of curriculum was not seen as a threat to the department as it was in the Business department; rather, it was viewed as an opportunity to meet a long-term vision for DHosP to provide learning experiences to students at a distance. "My vision... is that we will have 11 students, 10 students login wherever and the instructor will do a demo here and via the [modules], a student can do school from home but with live interaction" (Participant).

Management Style of Department

The cultural values and ideations about how to manage the students and staff of the departments polarized into two contrasting "styles."

In the Department of Business Programs the management style was highly bureaucratic, rational, controlled, and directive. This style was supported by the "mass production of graduates" contextual element and the structural mechanism of a controlling, directive dean who was passively resistant to the modularization project. The message to the faculty of the department was clear: activities would be done in the way prescribed by the dean, and no reasons needed to be given. This management style evoked a reaction from the professional staff who felt insulted and dictated to, but, interestingly, they directed their anger at senior executive, not the dean. "It [the message] was absolutely a straight 'Do it, period,' and that's exactly what they got. They got what they asked for [minimal compliance]" (Participant). The force of the management style of the department to enforce "rules" of compliance to the initiative was so strong that people felt that their jobs might be at risk: "If somebody has decided this

[modularization] is a good thing for us to do..., even if you personally disagree—if you personally disagree so strongly then you better look for a different job" (Participant).

On the other hand, the departments of Health and Hospitality had management styles based on teamwork and collegiality. Components of the context—the broad restructuring of the Health department using Total Quality Management Principles, for example—engendered this teamwork style. At the time of the TQM movement, departments were encouraged to find ways to have staff act in teams and both DHP and DHosP adopted certain strategies such as the use of change management teams, instructional teams, and faculty and leadership retreats. "The leadership retreat does help [with change management] because you are not distracted" (DHP Participant). This teamwork cultural mechanism resulted in positive effects on the modularization project in both DHP and DHosP. "We certainly support each other and, with the [modularization] project, it was a positive thing that people knew they could always turn to somebody and say, 'I'm stuck, this doesn't make sense and I just don't know how to do this'" (DHosP Participant). In DHP "some instructors even worked together and I, myself did [work] with someone. We sat and brainstormed together and thought it in as we went" (DHP Participant).

The management styles of departments were generally consistent as departments responded to top-down strategic change implementation. Respondents of the team-based programs of Hospitality and Health reported that team retreats were done regularly to respond to the many demands on their departments, demands from senior administration, the health or hospitality sectors, government, and others. In contrast, the Business department did not engage in team-based problem solving, and members looked up the bureaucratic chain for direction on how to respond to the forces acting on the department.

Ownership of Intellectual Property

Departmental cultural logic about the ownership of the intellectual property (IP) of modules varied across the departments. In the Department of Health Programs, it was very clear there was agreement that the modules created by staff in the employment of LEC belonged to LEC. "I wasn't somebody sitting at that table with a curriculum to protect. I didn't have ownership over ideas on paper in a file" (Participant). As such, the power of the cultural logic of ownership

of intellectual property had no reported effects in DHP; it was simply not considered at a conscious level.

The Business department's view contrasted sharply. Although contractually all curriculum developed by employees of LEC using LEC resources and during regular employment hours is the intellectual property of the college, a DBP participant commented, "I write and publish books for profit in an external role; I'm not willing to write and publish curriculum digitally internally [for LEC] for no profit to me." Faculty argued that some curriculum materials were created by them on their own time and outside of their employment contract with LEC and that the IP should therefore remain with them: "[The module] says, 'This is the property of [LEC].' Well, this image that I created on my own time outside of [LEC] that I use as a teaching device is not [LEC]'s" (Participant). Despite a clear policy statement from the institution that only materials for which the IP belonged to LEC be placed in the curriculum database, the IP "belongs to faculty" mechanism continued to operate in DBP supported in interplay with DBP's lack of trust of senior administration. "[Senior Administration] want me to put all this knowledge, everything I do in my course, ...in [the curriculum database] so that somebody else can come along and take it and look good on my back and people said, 'I'm not doing that'" (Participant).

In the Hospitality department, some concern was expressed by faculty members about whether or not the intellectual property of the modules created should belong to the college. However, this mechanism did not exert enough power to affect the departmental engagement with the strategic change as its power was negligible in interaction with the positive effects of other structural and cultural powers.

Learning as Commodity

Modularization of the LEC's curriculum into "chunks" based on outcomes is a curricular change that facilitates LEC's income creation strategy of selling training to business and industry through the marketing arm of the college called the "Business Development Unit (BDU)." The BDU was formerly the continuing education arm of the college, marketing courses to adult learners with a "life-long learning" logic. The shift of the focus of continuing education of learners

to business development marketing to industry (Levin 1992, p. 49) is a contextual element at the college level that affects the perspective of the departments in this study.

The Hospitality department spoke positively about BDU and the profit that could be earned for DHosP. "We look at the Con-Ed customized training... We can do $150,000 of Con-Ed business." In addition, a participant who was directly tasked with dealing with the Business Development Unit on behalf of DHosP indicated that the modularization of curriculum would be helpful to DHosP faculty in customizing courses to industry needs. "[With my] Con-Ed portfolio, it was really easy to build other components, other versions of courses because all of the curriculum is there [in the modularization database]."

In contrast, the Business department presented mixed messages regarding the marketing of customized courses and training based on DBP's curriculum. On one hand, the participants in this study agreed that marketing of courses was a positive thing:

> I don't think people have problems with profit motive. I think we here in Business understand what profit is. We don't have a problem with that. So if somebody comes over here from [BDU] and says you guys put on a small business course and we have an opportunity to put this on for this group of people and we're going to make lots of money out of that and can we have what you do? We say sure, here you are, have a good time.

However, DBP participants also reported that there are issues.

> [The] Business Development Unit takes our courses and offers them in different ways, shapes, and forms that threaten the integrity of our programs, of our diplomas, and managing those culture clashes is a real challenge.

Thus the Department of Business Programs on the surface supports the concept of the for-profit Business Development Unit but, in practice, has issues. A tension exists regarding recognition of the contribution of DBP to BDU activity. Further, one of the challenges for BDU is that they employ part-time instructors to teach the customized courses, often on a course-by-course basis. These instructors also often teach business courses part-time for other colleges, a phenomenon that doesn't occur with health or hospitality courses because LEC's health and hospitality programs are unique to LEC. Instructors employed by BDU need to clearly understand that the curriculum provided to them by BDU belongs to LEC, to militate against inappropriate use of the materials. One participant from DBP reported at this study's focus group that

> We've had a couple of particularly negative experiences over the past year that will leave instructors [in DBP] very reluctant to put their own teaching materials into their [modules] in that those [modules] have gone out to Business Development Unit instructors, for instance, and in at least one instance they've [the BDU instructor] then used those [modules] for [teaching in] another institution.

The curriculum provided by BDU for health- and hospitality-related courses is not at risk in the same way because of the unique nature of DHosP's and DHP's curricula. Clearly, there are college level structures (employment of part-time BDU instructors) that will continue to have effects on the Business department's level of distrust and skepticism about the "learning as commodity" cultural logic.

Questioning of participants did not probe for the "learning as commodity" logic; none of the participants from DHP responded to any questions foregrounding the "learning as commodity" discourse. No effect of the "learning as commodity" logic was found in the Health department data.

Departmental Status Needs

As with the "learning as commodity" logic, the Department of Health Programs data did not reveal any status needs of the department that affected the outcome of engagement with strategic change that was the focus of this study. Comments about the status of DHP were given in a matter-of-fact manner with no indication of passion or tension around this component. Even with researcher probing, the participants from DHP seemed comfortable with their status with the senior executive and other departments across the college.

In contrast, both the Business and Hospitality departments gave evidence of a high departmental status need although the status need mechanisms presented quite differently.

In the Hospitality department, an incident prior to the modularization initiative created awareness that DHosP courses and/or instructional staff were not viewed being as skilled or valued as others at the college.

> There was a time under the previous [DHosP] leadership where they were trying... to build a course, and there were courses offered through [the] Business [department] that they were trying to use. And it's true, Business did stand back and sort of say, "Listen, we feel that this [DBP's] course is

> here [at a high academic level] and what [DHosP] is asking for is a lot lower. Why should we be looking at it as being the same course?"...
>
> And that was just at the time that we took over as the new leadership team and we stood back and looked and we said, "They are right, so let's take everything that was done here with this new food and beverage course and let's just put it in a box and throw it away and... let's start again.
>
> So what we did is we chased national accredited curriculum and we said... "We need an accounting course, but you know, Business, yours isn't quite what we need. It's not quite there. We need something a little better, so we'll build it ourselves. Oh, no, that's okay, we can do that for you. We can make it happen." It's if people continually float to the lowest common denominator nobody is going to be successful. You need the backing of that national, curriculum—curriculum that's accepted across this country. That's what we'll start with. (Participant)

This incident crystallized tensions in the Hospitality department and became a strong motivator for recognition of the department as being as professional as other departments at LEC.

> We want to be leaders. We want to be looked at at the same level as any other [department] here at LEC. We don't want to be looked at as a small [department], or well, that's just the [Department] of Hospitality [Programs]... We want to be respected. (Participant)

The "status need" structure operated powerfully within DHosP in its engagement with the modularization initiative. The leadership team saw engagement with the modularization initiative as an opportunity to gain status with LEC's senior administration as evidence of a department that embraces the president's vision for the college to optimize the use of technology and excel in teaching and learning. As such, the initiative was an opportunity to refresh their curriculum using technology so that the department's curriculum could be delivered in new and innovative ways through e-learning. "My vision... is that... a student can login wherever and... can do school from home" (Participant). As instructors became excited about the potential of the modularization initiative to provide benefits to their department, they gained positive reinforcement as they interacted with instructors from other departments at the college.

> We don't just stay in our little shell here. We're all over the place. And so it got to be a bit of a bragging game where the instructors would say, "Oh, you're not finished [modularizing]? Well, I'm all done, and look what I've done and this is what we're doing," and... it gave them confidence. (Participant)

Additionally, a Department Head reinforced DHosP instructor confidence that their activities would gain them a positive reputation by reporting his experience at international conferences.

> I was at a conference that had attendance from all across North America last year from the CIA [Culinary Institute of America] in Hyde Park in New York to the Greystone Campus in California to the Cordon Bleu in Portland to -- and they know who we are. They don't know who LEC is. They know who the [Department] of Hospitality [Programs] is and [I came back to my program and said],... "With our new [modularization] project and our new renovation and what we've done, there will be nobody in Canada who will have a program that's as well put together as ours." (Participant).

In the Department of Business Programs, the need for status and recognition was evidenced by statements showing that instructors felt their expertise was discounted and undervalued by other members of the college, particularly by senior executive. The view that senior executive brings in external experts while overlooking resident expertise left departmental members feeling undervalued. Resentment at being undervalued by senior executive pervaded the perspective of the department to the strategic change initiative.

> What we do here is teach how to develop strategy, how to implement it, how to carry it through, how to measure its success and because we're good at that and we're current with the current thinking on that and *I don't think at the front end that they either know that or recognize that or care... I don't think maybe that that expertise is appreciated.* (emphasis added) (Participant)

This sense of being undervalued feeds into the departmental context of distrust of senior executive, so much so that severe resentment is evidenced by a participant stating, "All of a sudden it's, you know, we've got a bunch of people running the institute that don't know what we do. They're stupid."

Further, as the modularization team communicated standards and strategies to meet the goals of the modularization project to DBP, members again felt that their expertise was being questioned.

> There may have been a feeling that they (DBP instructors) were being grouped into a collective and targeted as part of a mass market that was saying to them, "You haven't done things properly in the past. You don't have a sound practice. You don't have objectives. You don't have a methodology or pedagogy for getting your materials across," when in fact they did." (Participant)

The character of the status need in the Department of Business Programs in turn interplayed with instructors' openness to training as training was seen to be insulting. Requiring instructors to have basic training to receive a PIN to have access to the modularization database became

reinforcement to the departmental members' sense of being undervalued as it was characterized as having "the basic assumption was that people didn't have the intelligence or the skills to go in and make an entry" (Participant).

The modularization initiative touched the departmental members' sense of efficacy in their core role of teaching. In other types of change initiatives that don't impact this core role, the status needs mechanism would likely not be activated in DBP, or if the mechanism were activated, it would not necessarily be as powerful. This was evident in the data through examples offered by participants of a performance management system implementation at LEC. This implementation activated only the status needs mechanism in the area of not consulting the Business department regarding technical information about performance management systems. In the performance management system strategic initiative, the status needs mechanism in DBP was much less powerful than in the modularization initiative. This is not unexpected due to the nature of causal mechanisms, their sensitivity to activation triggers, and the fluent nature of their character (Fleetwood, 2004).

Chapter Summary

The modified Context, Mechanism, Outcome (CMO) model used in this study requires analysis of the contextual elements, social structures, and cultural system components active in the case. In this chapter, I have outlined the *thematic* contextual elements, social structures, and cultural system components and described how their characters differed as exhibited through the emergent powers and mechanisms operationalized across the three departments. This chapter illustrates how slight differences in contextual elements, social structures, and cultural system components can result in the emergence of differing mechanisms that lead to differing outcomes. The character of the emergent powers in this case varied as they were reinforced or counteracted by other powers active in the departments. The most dramatic illustration of difference is the character of the departmental status needs of the Department of Business Programs in contrast with that of the Department of Hospitality Programs, the former resulting in resentment and hostility and the latter leading to excitement and creativity.

In the next chapter, I add to the causal configurations of the departments by describing powers and mechanisms that contribute to each department's *unique* causal configuration. To further understanding of the temporal nature of the emergent mechanisms and powers, I outline the characters of the elements and mechanisms and their activation over the timeline of the project.

CHAPTER VI: DEPARTMENTAL CAUSAL CONFIGURATIONS AND TIMELINES

In each of the selected departments at LEC, a cluster of thematic contextual elements, social structures, and cultural components created a unique departmental causal configuration (Fleetwood, 2004). The thematic contextual elements and social structures and cultural component mechanisms were described in the previous chapter. However, each department has a unique causal configuration consisting of both thematic constituents and those unique to the department.

As discussed in Chapter II of this study, clusters of causal mechanisms of social structures and cultural system components operating with contextual elements create causal configurations (Harrison & Easton, 2004). The resulting causal configuration has powers that are greater than those of the sum of its parts (Fleetwood, 2004). Further, Fleetwood (2004), Akroyd (1994), and Archer (2005) recognize that no two causal configurations are ever exactly the same as the subtle nuances of difference in any component of the configuration interact and the therefore different relationships result in differing powers of mechanisms (Elder-Vass, 2007). Out of this milieu, outcomes emerge (Pawson and Tilley, 1998).

In this chapter, I will present each of the departmental causal configurations. The character and extent of the influence of each of the contextual elements and generative mechanisms varied across the departments. The character of the thematic elements and mechanisms was described in the previous chapter. Each of the elements and mechanisms was activated and exerted differing influences at different times during the implementation of the modularization initiative due, as expected, to the temporal nature of morphogenesis (Archer, 1995). In this chapter, the presentation of each department's unique causal configuration is followed by a description of the activation of the constituents over the project timeline. The

descriptions trace when and how the causal powers emerged and operated in each of the departmental contexts (Fleetwood, 2004; Harrison & Easton, 2004).

General Timeline of the Modularization Project

For the purpose of describing the interplay of contextual elements and causal mechanisms over the time of the modularization project, I will describe each department's activities based on LEC's published timeline and targets for the modularization initiative. A summary is provided in Table 16.

Although LEC's vice-president academic announced in December of 1998 (T1) that "in three years, LEC will be modularized," faculty were generally unaware of the modularization project until the spring of 1999. At LEC, the third quarter of the calendar year is used for professional development and preparation activities for the departments. So, in April of 1999 (T2), staff became cognizant of the project through repeated awareness sessions, and training began to enable faculty to move from a topic-based course outline to an outcomes-based course outline by entering course outcomes into a database. This "program mapping" activity was a foundational step in moving the college curriculum to outcomes-based modules. The activity was dubbed "program mapping" because, when all courses were described in outcomes-based language and that information entered into a database, DHs could retrieve all of the outcomes and their requisite course names and numbers to produce a "map" of the learning that students moved through in completion of their program. Between the announcement (T1) and the spring "program mapping" activity (T2), the modularization team was assembled, and decisions were made about the policies required for the program mapping activity. The majority of the departmental contextual elements were in place at this time.

Between the spring of 1999 (T2) and 2000 (T3), extensive consultation, planning, and development was done by the modularization team. This included consultation with department leaders about the nature of the supports required to meet the goal of the project. The first version of the software application was developed. Annual targets were set for each of the three years of the project. Training was developed. Awareness and consultation sessions (called "program site

visits") were held with the staff members targeting every departmental program cluster across the college.

The spring of 2000 (T3) brought the first real awareness by departments of the extent of the redevelopment of curriculum that was required as the module template was provided and the first version of the web-based application to aid instructors to create modules was launched. At this time, the goal for departments was to modularize 20% of their curriculum. Spring 2001 (T4) and spring 2002 (T5) each had goals of an additional 40% of curriculum modularized for a total of 100% of all courses completed.

During each of the academic years 2000-01 (T3-T4) and 2001-2002 (T4-T5), the modularization team worked with program faculty, upon request, to assist with modularization activities. As issues arose regarding the sharing of curriculum and the use of the curriculum database, faculty were consulted and policies were debated, presented to the deans' council, ratified, and subsequently communicated to faculty. The curriculum database was mined to produce reports for department heads and deans regarding the amount of data that was entered; this machine count of data was used as a proxy for the number of modules developed, and reports were generated for departmental planning and accountability purposes. The "modularization fund" was established to which departments could apply for monies to support the modularization project through the hiring of part-time or temporary instructional faculty to allow full-time faculty dedicated time for modularization. This fund could also be accessed to support extra administrative staff to assist with the modularization initiative. In the spring of 2001 (T4), the second version of the modularization software application was launched with a more user-friendly interface and the enhanced capability to embed multimedia into the digital modules.

During the 2001-2002 (T4-T5) academic year at the college, senior executive, including department deans, agreed that all modules would be published digitally for student use in the fall semester of 2002 (T6). For the purpose of this study, the number of courses published for student use, in combination with information regarding the quality of the modules developed (Appendix C), guided the determination of whether a department was "high, moderate, or low" in

their engagement with the modularization project. Thus T6 is the milestone for the departmental "outcome" of the project. The timeline is outlined in Table 16.

Table 16. LEC Timeline for Modularization Project

When	Milestone
T1 – Dec 1998	Vice-president academic announces "in three years LEC will be modularized."
T2 – Spring 1999	Outline of Modularization Project communicated to Departments; Entry of course outcomes completed
T3 – Spring 2000	Goal of 20% of modules complete
T4 – Spring 2001	Goal of additional 40% of modules complete
T5 – Spring 2002	Goal of final 40% of modules complete
T6 – Fall 2002	Modules published online for student use

Department of Health Programs

Causal Configuration

Table 17 summarizes the character of each of the components of the causal configuration of the Health department. It must be noted that, although not always active in every department, the elements and mechanisms with italicized titles were identified by the study participants as especially influential in shaping the outcomes of the modularization initiative. Those without italicized titles are unique to the department and are explained in the Causal Configuration Activation section for the Department of Health Programs.

The causal configuration outlined in Table 17 only provides part of the story because each of these elements and mechanisms was activated at different times during the modularization project, and sometimes the character of the element or mechanism changed depending on the interrelationship with other constituents. What follows is a description of the activation and interplay of the elements and mechanisms for the Department of Health Programs.

Table 17. Department of Health Programs Causal Configuration

Outcome: Moderate Engagement

Departmental Contextual Elements	**Social Structure Mechanisms (SSM)**	**Cultural System Mechanisms (CSM)**
Change Culture: Hardy due to positive change experience with TQM	*The Role of the Dean:* Absent, then new, compliant	*Teaching and Learning Logic:* Mixed with both traditional instructional and experiential logics occurring
Previous Industry Experience: Acceptance of imposed standards; compliant with bureaucratic directions	*Department Head Role in Strategic Change*: Perception of ability to negotiate and manage change high	*Management Style of Department:* Balance of teamwork, collegiality and management intervention and support
Departmental Trust Level of Senior Administration: Moderate to High	*Technology Access for Curriculum Management:* Access to computers non-issue	*Ownership of Intellectual Property:* Corporate
Graduate Production Process: Mass production – craftwork blend	*Training Opportunities and Support:* Training professional growth opportunity and support for modularization initiative was accessed by the department.	*Learning as Commodity:* No data
Pressure by Health Sector for Access to Training Opportunities	Course Outlines Housed Centrally Resident Curriculum Expert	*Departmental Status Need:* Exhibited comfort with current status

Causal Configuration Activation: Department of Health Programs

In the Department of Health Programs, all of the contextual elements outlined for the departments were in place prior to the initiation of the project. The change culture was hardy and relatively open to new top-down initiatives from senior management as the trust of senior management's abilities and motives was moderate to high. The faculty's industry experience included experience with work-related standards and the documentation of workflow, so the introduction of the policy at LEC to describe courses in terms of outcomes was analogous to their industry experience. The nature of the training in DHP was such that their historical craftwork

production of graduates was under pressure by the health sector to begin producing more graduates with the same number of resources. In response, DHP had created "core" courses that could be taught in the large, multiple sections modality that would then feed into small, customized courses resulting in a blend of the craftwork and mass production of graduates. In contrast to the Business and Hospitality departments, the cultural mechanisms of "ownership of intellectual property" and "departmental status need" were in place with the view of corporate ownership of IP and an exhibited comfort with the department's current status. Thus these structures were unactivated throughout implementation of the modularization initiative.

During the spring of 1999 (T2), as the department began to engage with the modularization project, some confusion was experienced by DHs in DHP as the department's dean was absent. However, several social structural mechanisms (SSMs) were activated in DHP that smoothed the turmoil. First, the DHs' sense of efficacy with top-down strategic change was activated. Department heads felt that they had the knowledge and skills to handle this strategic change even in the absence of an active dean. Second, the department had all course outlines housed in a central location. Since the course outlines were largely based on statements of industry skill sets required for accreditation of the departments' graduates, many were already stated in outcomes-based language, so little work was required to adjust them slightly. Third, DHP had assigned a custodian of the course outlines who was a curriculum advisor to the faculty of DHP, and the custodian mentored other staff members as they worked to meet the standards of the "program mapping" activity. DHP's first engagement with the modularization initiative went smoothly.

During the period between the springs of 1999 (T2) and 2000 (T3), faculty attended the program site visits, and a new dean was hired for the department. The new dean was a former department head with a solid understanding of the department and was welcomed by the departmental leaders. In this new role, the dean supported the modularization project and consulted frequently with the modularization team about strategies to move the project forward in DHP. The dean was very encouraging of DHs and enhanced their sense of efficacy of managing

the modularization implementation. The collegial and teamwork management style cultural system mechanism (CSM) of the department was activated and supported by the dean.

Because DHs were compliant with the concept of the standardization and modularization of curriculum, they began to seek mechanisms to enable the department to meet the targets of the modularization project. In addition to the curriculum expert they had in their department, they worked together as a leadership team to find pockets of opportunity to get a positive start and began addressing curriculum challenges such as how to modularize, store, and provide access to the core shared courses of the department. They made decisions about who would be first trained of the faculty and hired extra administrative support for those faculty who would be actively engaged during the spring of 2000 (T3).

During the spring intersession period (T3), faculty in DHP accessed awareness training and a targeted group of faculty became highly trained in the modularization activity and began working with the modularization application. At this time, the collegial and teamwork style of DHP became an important mechanism in the level of engagement of the faculty members with the project. One department head commented that when faculty would come to her to complain about working in the modularization software, the DH "would say things like 'Okay, I must be a real loser, but I actually like working in [the application]. I don't know what's wrong with me!' Instructors would be joking about it!" (Participant). It is interesting to note that this statement indicates that the DH accessed training and worked in the application to gain a great degree of comfort in the knowledge of what the faculty was experiencing. This level of engagement with the project's processes and working in the application on the part of the DHs in DHP added to the DHs' sense of efficacy with the project. A DH comments, "I think it's really important—getting some experience because I think it just gets too easy to make decisions that aren't really based in reality." Additionally, the DHs' experience enhanced their credibility when they communicated about the project with faculty.

It is at this time (T3) that the "lecture" and "experiential learning" tension became activated in the department. The experiential learning model that was the espoused and supported the institutional teaching and learning logic embedded in the modularization template

was highly supported by some of the faculty in DHP and provided discomfort for others. The fact that the experiential learning model provided the guideline for the structure of modules as compared to alternative models triggered the activation of the tensions of teaching and learning logics. This cultural logic had mixed effects in DHP as some faculty struggled with using the experiential learning model to structure the modules.

During the 2000-01 academic year (T3-T4), DHP applied to and received two sets of funding from the modularization fund. Faculty were either involved in or observed others actively engaged in modularization activity. Faculty observed the support provided by their DHs as well as the LEC modularization team. Although many faculty members experienced stress about the modularization as it was a change to the normal workflow, they knew that they were supported by their department and LEC senior management which again interplayed with the teamwork management style and the department's sense of efficacy with respect to change.

The spring of 2001 (T4) brought an enhanced version of the software application, and all staff in DHP accessed a minimum amount of training. The majority of faculty began working in the modularization application. Although the path was not smooth—there were struggles with how to meet the modularization standards and targets—DHP experienced positive reinforcement for their modularization activities both through module completion data and through interaction with members of other departments at LEC. DHP had "bragging rights" because of good completion statistics and because of support strategies put in place by the department heads.

In the spring of 2002 (T5), the vice-president academic made a policy announcement that all modules would be made available to students in the fall 2002 semester through an access point on the college's website. This announcement activated the openness to online learning potential cultural mechanism in the department. In interaction with the contextual element of pressure by the health sector for more access, and the sense of efficacy of the staff to handle change, the announcement engendered some concern about the quality of the modules that faculty had been creating and whether they would meet the needs of the students, but the potential of the modularization project to aid DHP in making curriculum available to students digitally was largely accepted by the members of DHP. One participant stated "[Putting the

modules] online was not an issue. It was... just getting [the modules] 100 percent done [that was the challenge]." Another spoke about how DHP had been trying to understand how to effectively use technology to help student learning and that the modularization project gave them a structure (the modularization application) to enable them to effectively reach students with digital curriculum.

> There was lots of discussion about online learning; about computer-mediated instruction... We had some pretty archaic examples of that. Sometimes it worked, sometimes it didn't, but overall the direction was pretty clear and I remember having some anxiety about how we were going to make this transition when nobody knew how to do it. And I remember thinking that over and over and over that the senior administration is communicating this message. The message makes sense... When I work in my [traditional] structure, it doesn't know how to help me do that [deliver digital curriculum]. And then we had [the modularization project] and it started to work.

What this participant describes is an example of the emergent power of the modularization project and the digitized curriculum reinforced by the cultural logic of acceptance of online learning leading to a potential outcome of delivery of online learning.

The causal configuration of DHP led to a moderate level of engagement with the modularization initiative. A timeline outlining the activation timing and character of the components of the causal configuration of DHP is shown in Table 18.

Table 18. Department of Health Programs

Causal Configuration Activation Timeline

T1	T2	T3	T4	T5	T6
Assembly of Modularization Team and Planning	Awareness Program Mapping Activity	20% Modules Complete	60% Modules Complete	100% Modules Complete	
CQI + restructuring of DHP creates positive change culture	Absent Dean	Compliant supportive dean creates high sense of efficacy of DHs with change	Instructors continue to access training and support mechanisms	Openness to online learning and potential of digitized curriculum	Moderate Engagement Outcome
Relatively high trust of Senior Executive	Already have all course outlines housed centrally	Collegial and teamwork mgmt style	Positive reinforcement through completion statistics		
Industry experience with standards and documentation of work	Have curriculum expert to help staff move to outcomes language	Accessing of training and support of modularization team – hired extra support	Positive reinforcement when speaking to other departments		
Corporate Intellectual Property accepted	DHs feel efficacy with top-down chg	Lecture vs. Experiential Learning tension			
Pressure by Health sector for more access					
Blend of craftswork and mass production of graduates					

Department of Business Programs

Causal Configuration

Table 19 summarizes the character of each of the constituents of the causal configuration of the Business department. Please note that italicized elements and mechanisms were identified by the study participants as especially influential of the outcomes of the modularization initiative. Those without italicized titles are unique to the department and will be addressed in the Causal Configuration Activation section for the Department of Business Programs.

Table 19. Department of Business Programs Causal Configuration

Outcome: Low Engagement

Departmental Contextual Elements	**Social Structure Mechanisms (SSM)**	**Cultural System Mechanisms (CSM)**
Change Culture: Traditional, change-resistant culture	*The Role of the Dean:* Controlling, directive dean; not in agreement with VP Academic re strategic change parameters	*Teaching and Learning Logic:* Lecture, "sage on the stage," learning as traditional instructional process
Previous Industry Experience: Varied	*Department Head Role in Strategic Change:* Perception of inability to negotiate change	*Management Style of Department:* Controlled, directive, managerial bureaucracy
Departmental Trust Level of Senior Administration: Distrust	*Technology Access for Curriculum Management:* Lack of computers and PIN numbers	*Departmental Status Need:* High. Strong resentment of Senior administration result of perception of being undervalued.
Graduate Production Process: Mass production of grads	*Training Opportunities and Support:* Training required for access to application seen as barrier. Admin support for task militated against instructor engagement.	*Learning as Commodity*: Rhetoric of supporting marketing of learning, but strong resistance shown.
Some Faculty Published	VP Academic Pressures Compliance	*Ownership of Intellectual Property:* Faculty
Dean Unsuccessful for VP Academic Position	Junk Data Used	Status of LEC Rising

Causal Configuration Activation: Department of Business Programs

The contextual elements that comprised the context of the DBP at the initiation of the modularization initiative were vastly different from those in place in the Health department. The participants describe their departmental members as being older, traditional, and generally resistant to change. Generally, departmental members used a traditional lecture, "sage on the stage" instructional paradigm with multiple sections of courses and a mass production "assembly line" structure to produce graduates that have somewhat generic skill sets that can be used in many careers. Although use of standard modules would appear to be in alignment with the "assembly line" mass production contextual element, as with many realist explanations, digging deeper results in alternate understandings of the mechanism. The mass production of graduates also supported the instructional paradigm assumption that the instructor holds all the knowledge and imparts it to students. Thus providing modules to students that would remove them from that contact was incongruent. A number of instructors in the department who had published textbooks strongly held the value of the instructor being the source of knowledge of the instructional paradigm.

The critical contextual element that is unique to the DBP is that during the year prior to the announcement of the modularization project (T1), LEC sought a new vice-president academic. The dean of DBP applied for the position and was not successful. This was characterized by the participants as the dean being "passed over" and disrupted the assumption that senior staff members would be rewarded for their loyalty by being promoted.

> That individual [the successful applicant for the vice-president academic position] came from somewhere else and they're going to go somewhere else and the long-term LEC loyals perhaps left on the outside and maybe that's something that in the move to a new president here at LEC the long-term individuals, the ones that were perhaps potential succession individuals, the ones who had the faces, who had levels of implicit trust built up with a cadre of individuals, were left on the sidelines and for those other long-term people that were around, maybe there's some animosity (Participant).

This was the second senior executive member (the president being the first) hired "from the outside." A sense of distrust of the senior administration was activated.

When the modularization project was announced (T1), the dean of DBP became highly involved with the modularization team and heavily influenced the planning and template for the "program mapping" activity for the college. As LEC began this activity (T2), within the Business department, the dean characterized program mapping as the extent of the modularization initiative and directed that it would be completed. Although there was some confusion about the process of program mapping, generally staff engaged, and program maps were completed with the exception of one program that was in the midst of reorganization. Since the dean managed the program mapping activity for DBP, department heads felt disempowered in their roles with respect to strategic change.

During the 1999-2000 academic year (T2-T3), the modularization team, in consultation with LEC faculty, created the plan, the targets, and the supports for faculty to complete the modularization project. The implementation strategy was endorsed by the vice-president academic and the deans. The dean of DBP was publicly supportive of the strategy but was no longer highly influential in its implementation. During this period, the modularization team attempted program site visits with faculty in DBP, but the dean indicated that the faculty was "too busy" and that he would communicate to them what they needed to know about the modularization initiative. The result was that DBP faculty was not consulted regarding the implementation strategy, the design of the modularization application, or training needs. The lack of consultation added to the growing power of the lack of trust of the senior administration mechanism.

As the implementation strategy was communicated to the faculty of DBP in the spring of 2000 (T3), many members were confused as they received mixed messages. "There was some incongruity based on the public messages that I heard from the dean" (Participant). Many thought that their previous program mapping activity was the extent of the initiative. "The message was conveyed to us by... leaders at that time that [the program mapping activity] was it

and it was done" (Participant). Those who were not involved in training remained largely unaware of the activity occurring at this time.

Because of their leadership role, department heads were designated to be trained and to begin modularization of their curriculum so that they would have experiential knowledge of the project. The requirement to attend training became a barrier to the implementation as some DHs characterized this as an insult to the members of DBP because of a perceived implication that DBP must be "doing it [curriculum development, teaching] wrong" (Participant). For some members of the department, the department's traditional lecture paradigm mechanism exacerbated their sense that their teaching skills were inadequate.

Additionally, the characterization of the requirement to attend a minimum amount of training to receive a Personal Identification Number (PIN) added power to the status mechanism. The reluctance to attend training to obtain the required PIN number limited DBP's access to the modularization application, and this, coupled with instructors having older, less powerful computers, resulted in the power of the technology access structure being experienced as a barrier by DBP faculty.

Some members of the faculty attended training and began to modularize their curriculum; others attended training and accessed the modularization application but entered phrases like "under construction" or "this will be completed at a future date" to avoid true engagement and to trick the automated reporting mechanism embedded in the application which recognized that data had been entered, but not the nature of that data.

As the patterns of both active and passive resistance, minimal compliance, and limited engagement emerged in the DBP and, based on the nature of participant responses, it would appear that an inner circle of influential department heads and the dean came to agree that the senior executive—specifically the vice-president academic—was out of touch with the true nature of DBP's business and was unappreciative of DBP's expertise in both strategic change and teaching and learning. Regarding the modularization initiative specifically, a highly influential department head stated, "Our dean was certainly—the message I think we were getting from

there is yeah, okay, I hear what you're saying [the project is stupid], but go do it. You know, so the whole thing was botched."

During the 2000-2001 academic year (T3-T4), the training and support structure was triggered in a unique way in DBP. In contrast to the strategy of the Health department to use support funds to hire instructional staff to facilitate the modularization initiative, DBP hired support and trained existing administrative support to become the access points to the modularization software. That is, the mass production, "assembly line" contextual element became part of the strategy to meet the goals of the project. Instructors would pass curriculum products to the administrative support personnel who would enter the information into the curriculum database. Use of this strategy meant that not all instructors accessed the software application and so did not have first-hand experience with the power of the application to assist them in curriculum development. "We still have fully about 40 percent of our staff that don't have their PIN codes because the process that we've adopted at a program level is that our administrative support people do all the input to [the curriculum database]" (Participant). This mechanism contributed to the outcome of low engagement by the DBP faculty.

During this timeframe, the status of the president and the vice-president academic of LEC rose in the national and international college community as they made presentations at international conferences about the modularization initiative. As the efforts of the college to modularize and digitize curriculum garnered respect and other colleges began to make advances to the college to share the modularization software, passive resistance on the part of the dean of DBP became untenable. "And it was he [the Dean] who said I fought and fought for you guys to not have to do this, but you know what, we have to do it, so get to it and do it" (Participant). Additionally, as completion data was generated for each of the departments, all deans were aware of their completion rate as compared to other departments. The dean and DHs of DBP suffered embarrassment with low completion rates.

During the modularization activity in the spring of 2001 (T4), DBP became dysfunctional. Instructors had heightened awareness and fear of the targets of the project, and department heads were uncertain if they should encourage faculty to attend training and gain access to the

modularization application or encourage them to use the strategy of using administrative support professionals to enter the curriculum information. Many instructors experienced a clash with the experiential learning model embedded in the modularization template. The directive and controlling departmental management style manifested by the dean insisting that the targets must be met, further reduced the DHs' sense of efficacy with managing change. "I mean it was very much directed that it's going to be done, it's going to be done in a fashion that potentially will be useful, and it will be done on time" (Participant). Although employees are under contractual agreement about curriculum developed by employees of LEC belonging to the college, the "ownership of intellectual property" structure was activated. The high status need of the department externalized as resentment at being undervalued and departmental members engaged in aggressive and challenging behavior to other members of the college during training and support events. Members of the college observed this negative behavior, and DBP's status suffered. The "learning as a commodity" logic was activated as Business Development Unit activity was seen as threatening to the status of DBP and intensified the sense of being undervalued. The core tension appears to be in the need for recognition of the contribution of the DBP faculty for the work they contributed to building the curriculum—a status need.

> I'm going to develop my [module] in small business. I'm going to put it in here in the system and then somebody can come upon it and take my stuff *without asking me* (emphasis added)... I think everybody [in DBP] has said, "Oh, somebody can come in and I've worked ten years developing this course to this point and somebody can come in and just take it away from me."
>
> So that image was one of the things that people were concerned about, that there was no "Gee, you've done a great job. I can really use this and your help and can you share that with me?" Nobody will ever say no to such a request. Nobody would ever, ever, say no, but it was the fact that they may not be asked. (Participant)

As the college entered the final spring curriculum development period of the modularization initiative (T5), the effects of the interaction of the powers of the structures and mechanisms in DBP resulted in huge challenges for the department. The vice-president academic was not accepting of any department not meeting the goal of 100% completion. DBP experienced huge pressure to meet the goal. Since all courses were to be made available to

students in the newly modularized digital format in the coming fall semester, instructors struggled with the seemingly insurmountable task. The dean and department heads recognized that the Business curriculum in the modularization database was of very uneven quality. Those small programs whose department heads were not in the inner circle and who largely met the college targets for the modularization activity were preparing to publish their modules for students. However, to prevent embarrassment of programs that were unprepared, the dean mandated that no program in the department would publish for students in the fall semester. That decision was reversed by the vice-president academic, heightening resentment and anger within the department. Less than fifteen percent of the department's curriculum was published (T6). A timeline outlining the activation timing and character of the components of the causal configuration of DHP is shown in Table 20.

Table 20. Department of Business Programs Causal Configuration Activation Timeline

T1	T2	T3	T4	T5	T6
Assembly of Modularization Team and Planning	Awareness Program Mapping Activity	20% Modules Complete	60% Modules Complete	100% Modules Complete	
Older faculty, traditional, change-resistant culture	Dean controlled and steered program mapping activity in LEC	Dean no longer in control of activity or timelines	Faculty awareness of modularization targets heightened	Dean and DHs resist releasing modules to students	Low Engagement Outcome
Traditional Lecture Paradigm	Dean positioned program mapping as extent of modularization	Mixed messages to staff about what they have yet to do for modularization	Faculty IP activates as barrier	Dean mandates that no one publishes until all programs ready	
Mass production of graduates	DHs directed by Dean to engage in program mapping activity	Training required to gain PIN seen as barrier (Insult to faculty)	Dean mandates the "activity MUST be done." DHs feel no efficacy re change	Huge pressure by VP Academic to comply with publishing target	
Faculty IP	DHs feel disempowered re change	Training seen as insult to faculty	DBP uses admin to shield instructors from activity		
Dean of DBP "passed over" for VP Academic position		Status of Senior Administration rising	High status need manifests as resentment		
Trust of Senior Executive in question		Aging computers as barriers	BDU activity seen as threatening to DBP		
		Inner circle of DHs agree re executive doesn't understand DBP's business	Struggle w Experiential Learning model by those who		

Table 20. Department of Business Programs Causal Configuration Activation Timeline

T1	T2	T3	T4	T5	T6
Assembly of Modularization Team and Planning	Awareness Program Mapping Activity	20% Modules Complete	60% Modules Complete	100% Modules Complete	
		or appreciate expertise	"lecture"		
		Some faculty enter "junk data" to "fool" the reporting tool re completion rate	Poor completion statistics embarrass dean and DHs		
		Many faculty unaware of modularization	Other departments observe DBP resistance		

Department of Hospitality Programs

Causal Configuration

21 summarizes the character of the constituents of the causal configuration of the Hospitality department. Elements and mechanisms without italicized titles are unique to the department and will be addressed in the Causal Configuration Activation section for DHosP that follows.

Table 21. Department of Hospitality Programs Causal Configuration

Outcome: High Engagement

Departmental Contextual Elements	**Social Structure Mechanisms (SSM)**	**Cultural System Mechanisms (CSM)**
Change Culture: Open	*The Role of the Dean:* Absent, then new, compliant, and supportive	*Teaching and Learning Logic:* Learning logic apparent; experiential learning occurring
Previous Industry Experience: Character of the previous occupations of departmental members create a collective openness to change	*Department Head Role in Strategic Change:* Perception of ability to initiate, manage, and negotiate change high	*Management Style of Department:* Balance of teamwork, collegiality and management intervention and support
Departmental Trust Level of Senior Administration: Extremely High	*Technology Access for Curriculum Management:* New state-of-the-art computers purchased	*Ownership of Intellectual Property:* Corporate ownership generally accepted
Graduate Production Process: Craftswork production mentality	*Training Opportunities and Support:* Repeat training encouraged. Training a public display of support for initiative. Department provided dedicated modularization support.	*Learning as Commodity:* Supported and encouraged
Initial Dysfunctional Culture		*Departmental Status Need:* High Status of LEC Rising

Causal Configuration Activation: Department of Hospitality Programs

The contextual elements that comprised the context of the Department of Hospitality Programs as the project was announced (T1) were very different from those of either the Business or Health departments. The department's production of graduates was a highly "craftswork" style with small groups of students working in experiential learning situations—largely in cooking and baking labs—supervised by an instructor who held journeyman certification. Faculty were respected by students due to the positive reputations that faculty had in their industries prior to employment at LEC. The previous work experience of the faculty members was one of physically demanding work with long hours, and the transition to the college employment structures was appreciated by the faculty, which made them compliant to demands of senior administration. "So we come to LEC, we... have all this time and we've always said that there's a lot of things to do at LEC—we're very busy—but we have the time to do [what is asked]" (Participant). As well, the hospitality industry is one where finding creative solutions to problems is common place—"in the hospitality industry we deal with that daily, 'make it work'" (Participant)—so this contextual element was supportive of a "let's tackle it and get it done" kind of attitude on the part of the faculty.

At the time of the announcement of the initiative (T1), the department's dean was absent due to illness, and the overall management of the department fell to one highly controlling department head. "It was practically a dictatorship in this [department]" (Participant). This DH's management style had a very negative effect on the faculty resulting in a tumultuous, dysfunctional context. "There were teams and groups of people who worked against each other" (Participant). There was a high level of distrust of departmental management. A participant gave an example of a well-respected faculty member who "was so paranoid he documented his days. He logged his days. It was unbelievable. He thought that they [departmental management] were out to get him. That's where we were."

As faculty were called to engage in the initial "program mapping" activity (T2), a member of the DHosP who would later become a department head, volunteered to lead the program mapping activity. As he engaged in the project, he saw a strategy that would motivate faculty to see the value of the program mapping activity. The strategy helped bridge faculty from curriculum renewal activities that they clearly understood, to engagement with the modularization project.

> We took [program mapping] and we set it aside. We said, okay, [we] need to tackle this a little bit differently. Number one, because we're a dual program, in Culinary Arts anyway, [with both a] full-time [and] apprenticeship [program], we said, hmm, we need to align these two, which was an event, so the staff bought into that readily because they knew that was an important step for the program. It had never been done. That alone was a huge goal—they'd say, how are we ever going to do this? Well, I'll tell you how. Every single objective in the apprenticeship outline versus every objective in the full-time program, comparative analysis, I personally did that. I headed it up with another instructor. Eight months.
>
> Now, we were able to go back to the Alberta Apprenticeship Board and say we want more credit because we've just done a comparative analysis. We want more accreditation to the full-time program. Now we have that, so when the students are done their two-year program they can write their journeyman exam. That excited the staff. (Participant)

The work done in leading this activity and the contribution to positive status the new accreditation gave the faculty were mechanisms that interacted positively to help faculty view the modularization activity positively.

Just prior to the 1999-2000 academic year (T2-T3), the controlling department head resigned and the new DH with other DHosP leaders solicited commitment from every staff member to their leadership as the beginning of changing the dysfunctional nature of the department.

> When the new leadership team took over, which included myself, we basically sat everybody down on a one-on-one basis and we said, "Don't live in the past. Let's look at the future. We've done some good work. We're going to do great work. Do you trust me? Do you trust that we can take this ship to where it needs to go? Yes or no? Because the option is sort of you either buy in or start looking at other options, because we need you to be there for us and if you don't agree with how we may be taking this or the direction we're taking it in, then you know, you may just not have a place here." It was quite cold at first. (Participant)

The DHs of DHosp demonstrated their commitment to renewing and revitalizing the department through work with the staff in visioning of the department's future.

> The first week of September, I gather the faculty together in two groups, in focus groups. We talk about change. We talk about vision. We talk about blue-sky thinking. We talk about operation core business and we document all of these tidbits. And from there, we take them with the leadership team, we go on a retreat for a couple of days out into the country. We take all of those, all of what LEC has given us, require change, and we meld it into a Hospitality business plan. (Participant)

It was also at this time that the status needs of the department were activated by activity around the DHosP courses previously rejected by the Business department because of a low academic level as compared to the Business courses. The DHs addressed the challenge by moving to a nationally accredited curriculum. The use of an accredited curriculum gave members of DHosP confidence that their curriculum met national standards, and this was an overt move that signaled to the DHosP faculty that world-class standards would be the expected norm for the department.

During this time, DHosP's trust of senior administration was activated to support acceptance of future targets of the modularization project. "If the V.P. [Academic] feels that there needs to be change in certain areas, he brings with him obviously a polished portfolio. He wouldn't be here if he didn't" (Participant).

As the faculty began building modules in the spring of 2000 (T3), DHosP's dysfunctional culture had moved a long way, and the collegiality and teamwork mechanism was activated to meet the initial targets of the initiative. A new dean had been hired for the department who created a high sense of efficacy of the DHs with respect to their ability to manage change. "My dean has [said] to me, 'I don't really know what you do, but I do know that you do everything that you need to do to get the job done and to proceed'" (Participant). A change open culture began to flourish. "We welcome change and are in a mindset that change fuels ideas which fuels current trends which fuels student success" (Participant).

Members of DHosP were encouraged to attend modularization training. "The message was 'This is a mandate that LEC is embarking on, we need to [modularize] our curriculum and here's the training and let's get [modularizing]'" (Participant).

The modularization training mechanism was supported by the endorsement of the modularization initiative by a highly-valued, senior instructor.

> Part of our success was we had an instructor here... he was a big believer and he used to stand up at meetings and say, guys, we've got to get together and we need to build—he used to always refer to it as 'the big filing cabinet'—and he would say, 'We need every skill set and competency alphabetized and put into order so that whatever we teach we just pick up the file and go.' And when modularization came along, he said, 'Oh, see, that's it. That's what we need'... And everybody [said], 'Hooray, we have the big filing cabinet and look at that, it's digital, it's electronic. I can do it from home. You know, this is just too cool.' (Participant)

Recognizing the need for appropriate computer hardware to support the modularization initiative, DHosP purchased new state-of-the art computers for the faculty. This is an example of the recognition of a structural power that could be experienced as a barrier to the modularization initiative that, through intervention, was activated as a catalyst to faculty engagement in the strategic change.

During the following academic year (T3-T4), mechanisms that supported members' engagement with the modularization initiative were activated and intertwined to lead to high quality modules being developed. DHosP accessed the modularization fund to put in place a curriculum expert to support faculty efforts. The modularization reports on DHosP's progress showed the department meeting the targets of the initiative, resulting in high praise from their dean. Training continued to be encouraged by the DHs, but also monitored and overtly supported with members of the DHosP leadership team attending training with their faculty members. At various events, DHosP members received positive reinforcement for their progress from members of other departments at LEC.

> And, you know, our instructors were already starting to get pumped up about their successes... It got to be a bit of a bragging game where the instructors would say, "Oh, you're not finished [modularizing]? Well, I'm all done, and look what I've done and this is what we're doing," and... it gave them confidence. (Participant)

As the department continued its modularization efforts in the 2001-2002 (T4-T5) academic year, the DHosP leadership team exhibited commitment to DHosP's completion of the project on time to a high quality by hiring, with their own funds, the curriculum consultant who had

been supported by the modularization fund the previous semester. DHosP hired "this person for one year, [as a] full-time staff who... help[ed] the staff [modularize curriculum], understand [modularization]... She's here to educate the staff on how to do this properly" (Participant). A department head met regularly with the curriculum expert and critiqued the modules for quality—a form of peer review. The curriculum expert would then work with the staff members to improve the module to meet the standards of the DH.

> I have the ability to look at a [module] or a piece of material and say... that's worthy, or that's just not worthy. I've been a student here. I've been a staff member. I've been part of the leadership. I've seen it at every angle. So, we would meet periodically—three times a week. I would go into [the curriculum database] and I would tell [the curriculum consultant], "This doesn't make sense. This shouldn't be there... we need to rethink that." (Participant)

The high status needs of the department were being met as DHosP members spoke to colleagues outside of LEC.

> Externally when we would speak to colleagues at other colleges about the [modularization] process and where we're at, I mean I'd just grin from ear to ear because it was something to brag about. It was a prestige thing and they would say, "What, you have that?!" (Participant)

The mechanism of marketing of curriculum supported the sense of efficacy of staff and positive growth of the department. "We look at the Con Ed customized training... We can do $150,000 of Con Ed business" (Participant).

With so many mechanisms tending to support DHosP members' engagement with the modularization initiative, the mechanism of ownership of intellectual property by faculty, when activated, was powerless to gather support.

> I think we saw a slight bit of... the copyright issue, the "that's mine" issue, the "I'm not giving it to them" issue. There was some of that, but you know, it's a true statement when I say in this department it's like throwing an extra grain of salt into the soup pot. It doesn't make a difference because there's so much positive energy that it just gets snuffed out and there's no room for that. (Participant)

During the spring period of 2002 (T5), DHosP's efforts in the modularization initiative were far ahead of any of the other departments at the college. Their vision and openness to online learning was beginning to challenge the capacity of the college to meet their needs to

embed multimedia into the digitized modules. Faculty's sense of professionalism and efficacy was extremely high. Collegiality and energy pervaded the department.

The outcome of the modularization initiative for the Department of Hospitality Programs resulted in the publishing of ninety per cent of its curriculum to students (T6). A timeline outlining the activation timing and character of the components of the causal configuration of DHosP is shown in Table 22.

Table 22. Department of Hospitality Programs Causal Configuration Activation Timeline

T1	T2	T3	T4	T5	T6
Assembly of Modularization Team and Planning	Awareness Program Mapping Activity	20% Modules Complete	60% Modules Complete	100% Modules Complete	
Absent dean Highly controlling DH	Soon-to-be DH leads program mapping activity	New dean creates high DH sense of efficacy with change	Instructors continue to access training	Positive effects of modularization on marketing	High
Dysfunctional negative culture fosters turmoil amongst staff	Previous DH resigns	DHosp accesses training and support	Positive reinforcement with high completion statistics	Faculty have strong sense of professionalism and efficacy	Engagement
High distrust of DH	DHs lead visioning activities. Begin building collegiality	Computers Purchased	DHosP hires curriculum consultant	Strong vision for online learning and potential of digitized curriculum	
Previous industry experience of hard work and long hours	High level of trust of Senior Administration knowledge and motives	Teamwork and collegiality Invoked	Positive reinforcement from members of other departments		Outcome
Craftswork production of graduates	Status needs activated	Change open culture flourishes	Positive prestige outside of LEC		
	DHosP accesses national curriculum	Senior instructor endorses modularization	Faculty ownership of IP mechanism powerless		

Chapter Summary

Because causal configurations for each of the departments in this study consisted of more constituents than the thematic constituents described in the previous chapter, I provided a unique causal configuration for each of the departments in this chapter. Social reality is stratified (Bhaskar, 1998); therefore, what we can observe is produced by underlying generative forces (Elder-Vass, 2007) that may not be immediately and readily observable or reportable (Pawson & Tilley, 1998). Each constituent in a unique causal configuration such as I have provided for the departments in this study, requires digging deeply into what forces were at play to prompt the manifestation of the particular constituent in the manner and timing observed. For this reason, some constituents that would appear to be supportive with each other are not. An example is the "assembly line" graduate production of the Business department that would appear to be in alignment with the standardized approach that modularization prescribes. However, the experiential nature of the module template created to meet the espoused teaching and learning logic at LEC created an underlying force that militated against such alignment. This is in agreement with the research of other critical realists who find that mechanisms don't always operate as expected (Ackroyd, 2004). Investigation of multiple unique causal configurations of the departments within the larger case of the modularization initiative at LEC resulted in more in-depth analysis as I asked: What could possibly make this mechanism manifest in such a different way from the other two departments? Retroductively working backwards to the underlying emergent powers of mechanisms resulted in deep understanding of the forces at play in the real domain. As such, I was able to describe each department's unique causal configuration, outlining the characters of the elements and mechanisms at play in this study. Additionally, mechanisms can potentially change their character over time. Harrison and Easton (2004) in their study across different industries on the impact of the banning of chlorofluorocarbons (CFCs) noticed the shifts in the nature of mechanisms over time.

The timeline and activities of the departments were described to trace when and how the causal powers emerged and operated in each of the departmental contexts. This allowed the

nuances of the relationships amongst constituents' emergent powers to be illustrated and understood—a key component of critical realist explanations (Akroyd, 1994; Archer, 2005).

The departmental outcomes of high, low, and moderate engagement with the strategic change initiative were explained through noting nuanced differences in the constituents of the unique causal configurations. A key cultural component for the Business and Hospitality departments was the need for status within the institution and in the broader institutional field. The status need was not a key feature of the causal configuration of the Health department. In DHP's case, the most powerful constituent appeared to be the department's history with top-down strategic change in the TQM initiative that resulted in a change-hardy context with team-based management style. In the next chapter, I discuss this study's findings in response to the guiding research questions posed at the beginning of this study and further explore the status-need mechanism that manifested very powerfully during the modularization project implementation.

CHAPTER VII: DISCUSSION

Introduction

My motivation for this study was to better understand the interplay of constituents in the causal configurations active during the modularization initiative at LEC. The techno-rational, top-down, strategic change process knowledge available to me during the initiative did not prepare me for the challenges of the unique departmental cultures and contexts that resulted in uneven engagement with modularization. The simple prescription to establish a sense of urgency, endorse a team to lead the change, create and communicate the vision, enable others to act on the vision, create and consolidate short term wins to lead to further change, and institutionalize the new behaviors through demonstrations of success (Kotter, 1995) did not allow for, nor credit the legitimacy of resistance by faculty to the imposed change. I selected the three departments for this study as they represented points on a spectrum of engagement with the initiative. Other departments at LEC also varied in their levels of engagement; each has its unique causal configuration that would explain its outcomes. The use of an adaptation of Pawson and Tilley's (1998) Context, Mechanism, Outcome (CMO) model is appropriate as it was designed by Pawson and Tilley to understand *why* an intervention results in its outcome. My perspective for this study was as a practitioner in implementing strategic change; the resulting discussion in this chapter remains from that perspective. I call on theories of change leadership and change models in higher education to focus on practical implications.

Three bodies of literature were used to inform this study and provide ontological, theoretical, and analytical foundations. First, the literature on change with a focus on change in higher education, departmental leadership, and the leadership of change provided an understanding of what is currently known and theorized about the dynamics of change in the unique context of higher education. This literature was used to conceptualize and support the implications section of this chapter.

The literature regarding critical realist ontology provides the ontological foundation that supports the analytical framework used in this study. The literature on the morphogenetic approach, institutional logics, and the Context Mechanism Outcome (CMO) model, provide the underpinnings for the analysis of the findings. Archer's (1995) morphogenetic approach was the foundation for my understanding of a realist view of change. The emphasis of her model on the analytical separation of social-structural mechanisms from cultural component mechanisms led to the adaptation of Pawson and Tilley's CMO model. The resultant framework supported the emergence of a more fine-grained causal configuration that facilitated a deep understanding of the mechanisms at play in this study. Pawson and Tilley's model, on the other hand, provided a manageable framework that was powerful in its simplicity for sorting through the large volume of data and categorizing it effectively for interpretation. The typology of mechanisms (Hedstrom & Swedberg, 1998) and the Desires, Beliefs, Outcomes, (DBO) theory (Hedstrom, 2005) provided the explanatory framework used in this chapter to explain the different outcomes of the departments in alignment with critical realist ontology.

In this chapter, I provide a discussion of the research findings. I begin by summarizing and discussing the results that address the research questions posed in Chapter I. I then provide a discussion of the most influential mechanism at play in this study—that of status needs of individuals and departments. Implications for future practice of change agents in higher education institutions are outlined. A discussion of the change process and a potential approach to change management as action research is offered. I follow with an acknowledgement of some of the contributions of this study and opportunities for further research.

Research Questions

The guiding question for this research study was: How does the interplay between departmental contexts, organizational structures, and cultures affect the implementation of a strategic change initiative? In this section, I overview how the results reported in Chapters V and VI inform the research questions posed in Chapter I. I summarize the departmental cultures and

their major influential variations and discuss how the implementation strategies and visions emerged and the departmental faculty perceptions that resulted.

Departmental Cultures

Research question one asked "What was the nature of the departmental cultures?" The study uncovered three very different departmental cultures for the selected departments within the larger institutional college culture of LEC. These departmental cultures' major influential variations were degree of openness to change, the prevalent teaching and learning paradigm, departmental management style, and status need. All of these constituents were discussed in the previous chapter; a summary is provided in Table 23.

Table 23. Departmental Culture—Highly Influential Components

Cultural Component	Health	Hospitality	Business
Openness to Change	Hardy	Open	Resistant
Teaching and Learning Paradigm	Mixed	Experiential Learning	Instructional
Management Style	Collegial	Collegial	Authoritarian
Status Need	Low - Unthreatened	High	High

These highly influential cultural components in the causal configurations of the departments were activated and exerted their power in the implementation of the modularization initiative. Because of the nature of causal mechanisms, in a different strategic change implementation at the college, these mechanisms may or may not be activated. As discussed in Chapter II, critical realists recognize the contingent nature of causal mechanisms. Therefore, in differing implementations of strategic change, some cultural components would be closely related and more readily activated—the openness to change component, for example—but others would be activated only in specific kinds of change. For example, a strategic change initiative that participants discussed in the focus group was the implementation of a college-wide performance

management system. In this initiative, the teaching and learning paradigm cultural component was only mildly activated because the performance management system had not touched the teaching and learning activities of faculty. It is reasonable to expect that other cultural components would exert more power such as a "professionalism" logic resisting the "managerial" logic embodied in a bureaucratic performance management system. The selected cultural components that were highly influential in this case were only a few of the many components in LEC's departments' cultures. As Kezar and Eckel (2002a) note, understanding change in a deep and meaningful way does not reduce its complexity, and change strategies are highly dependent on many constituents.

Participants in the focus group also commented that policy requirements from government are viewed differently and activate different action-formation mechanisms on the part of college members. Department leaders recognize that senior administration have little choice about implementing government policy, so they are more amenable to compliance than when senior administration implements a policy generated by senior administration without consultation with department leaders. In the strategic change process, relationships between causal mechanisms and their effects are contingent rather than fixed.

Emergent Powers and Adaptive Implementation

I will discuss research questions two, three, and four in two sections. Since research questions 2, 3, and 4 are heavily interrelated in this case, I begin with a description of how these questions are answered in the context of the case of this study. I then discuss their implications in terms of a more generalized case.

The questions are:

2. How does an implementation strategy change during implementation? What contextual elements or emergent structural or cultural powers might result in the implementation strategy to be altered?

3. How does the implementation strategy affect the perceptions of college faculty of the initiative within their departmental cultures? How do these perceptions differ amongst departmental cultures?
4. How do faculty perceptions of the strategic change implementation impact decisions to participate in the change initiative? How do faculty perceptions and actions change during the implementation of the strategic change and integration of the new structures—processes, procedures, rules, resources—into the departmental context?

Emergent Powers and Adaptive Implementation for the Case

At the beginning of the strategic implementation of the modularization project at LEC, the vice-president academic described the modules as "expanded syllabuses" that included explicit statements of the outcomes students were to achieve with pointers to the course content in textbooks, course packs, or other resources such as websites. As the modularization team consulted with curriculum experts at the college, a standard template evolved based on the experiential learning model that, upon completion, could be as simple as an "expanded syllabus" or as complex as a full lesson with content in the form of text or media. The emergent power of that template operated through its prescription of the college-supported experiential learning model. This power became a barrier for some faculty due to their unfamiliarity with the model and, for others, due to the conflict with their internalized instructional paradigm. Upon request of program leaders for more support for the faculty experiencing difficulty, the modularization team created training to address not only the technical skill of working with the software, but also the teaching skill of using the experiential learning model. This is an example of how the emergent power of the structure of the software application impacted the implementation strategy and the outcome of the project.

Second, the ability of the modularization template to provide for both "light" and "enhanced" modules depending on the amount and type of content included in the module, led to resistance from some faculty regarding intellectual property of the content.

Another emergent power of the software application was due to a deliberate design feature that allowed all modules to be viewed but not altered by all users of the software.

However, within a departmental group, all users of the software had editorial access to all the modules to support collegial sharing of course materials within a program. This design feature, which resulted in all members of a program group having the ability to edit, led to security issues, so the Personal Identification Number was used to allow only the members of a program group editorial access to their modules. The risk of giving group access was that faculty could inadvertently make changes to modules or even delete them if they were not skilled in the use of the application. This emergent power of the software led to the implementation strategy of all users of the software being required to take minimum training before being given their PIN. This power was perceived as a barrier by the Business department. As a result, DBP's implementation strategy included training administrative support personnel to enter information for faculty. Resources were utilized to support administrative personnel, and faculty did not use the full power of the software application to support their teaching and curriculum development.

In the last year of development, both to encourage departmental engagement with the project and to provide value to students as a result of the project, LEC staff from across the college were brought together to determine how best to provide the modules to students. In the past, students had received materials from instructors, but due to the budget cuts of the early 1990s, departments began putting course materials into course packs that were sold to students through the campus bookstore. Because of the history of print course packs, the initial conversations were largely about a system to print, wrap, price, and market the modules in a course pack format. One faculty member questioned the assumption that the modules should be provided in print format; as a result, the decision was made to provide the modules digitally to students. The emergent causal power of the digital nature of the modules allowed for delivery to students digitally. For the Health and Hospitality departments, this created a challenge of ensuring that the modules were ready for student use and that their students were well-informed about how to access them. For these two departments, their implementation now focused on student readiness. DHosP began challenging the college to provide the ability to embed multi-media into the digital modules. The emergent power of the digital nature of the modules altered the outcome of the project in its delivery modality to students.

For the Department of Business Programs, this emergent power of the software to provide digital modules to students was experienced as a barrier as fearful and skeptical staff became certain that the intention of the senior administration had always been to "go online" and eliminate the need for faculty. This was a valid concern of faculty, for although the modularization team had the knowledge and experience to realize that "going online" would not reduce the need for faculty; however, managers in the Business Development Unit were already envisioning instructors managing larger classes online than in the face-to-face environment. Certainly, the rhetoric of "gaining efficiencies" by digitizing curriculum could be interpreted as a reduction of faculty.

Because of the dysfunctional leadership and communication of DBP discussed in the previous chapter, many staff members' first real engagement with the modularization initiative was, at this time, with a "just do it" pressure to meet the deadline. This affected the implementation strategy of DBP because publishing of modules for student use was delayed while harried instructors attempted to meet the goals. Instructors perceived the project to be ill-considered, badly planned, and of little use to them and their students.

Since this was a very ambitious strategic change with a very aggressive timeline, the implementation unfolded and strategies emerged to meet the needs of departments throughout the three years of the project implementation. One of the major criticisms of the project by the participants from the Business Department was one of poor communication of the vision for "how things would be different" upon completion of the project. I agreed with the participants that the popular literature (Kotter, 1996) maintains that a vision of the future needs to be painted to provide motivation and meaning for people to engage with a change. With this project, the vision emerged and evolved as the project evolved and was slightly different depending on the perspective of the individual. Initially, the vision for a module was simply an "expanded syllabus," but once the decision was made to provide a digital template to aid in meeting this goal, the vision grew to be that of a digital knowledge store that could be shared amongst all of the departments at LEC to reduce multiple versions of similar curricula. The example was often given of Ohm's Law being taught in eighty programs across the college with each instructor developing his or her

own materials. Having curricula available to all departments in one digital storage space was seen as potentially helpful and efficient for instructors. Quality could be assured and prior learning assessment could be done easily as students moved amongst the departments at LEC. This vision for the use of the digital curriculum led to an implementation strategy that was focused on faculty and administrative use of the modules.

Over time, because the curriculum was digital and designed for students, the vision for its use grew to include the provision of the modules to students in an online digital format. Many individuals across LEC saw different uses for the digital curriculum constituents in the database including provision of digital course outlines to students, program maps to department heads, validation surveys for industry partners, prior learning assessment, upgrading opportunities for students for partial course requirements, and creation of both print and digital customized courses. This expanding vision for use of the digitized curriculum caused some confusion with departments as they learned about the different "goals" and while some saw the expanding vision as evidence of a hidden agenda; others saw the expanding vision as adaptation and growth. In time, especially for the Department of Hospitality Programs, the vision included the use of multimedia—yet another refinement.

Emergent Powers and Adaptive Implementation—General Implications

In this section, I address the general implications of research questions two, three, and four.

Research Question Two: How does an implementation strategy change during implementation? What contextual elements or emergent structural or cultural powers might result in the implementation strategy to be altered?

According to a strategic planning, teleological change model, as organizational leaders become aware of an issue or complex set of issues, a potential solution is identified, based on knowledge and experience of the organizational leaders supplemented by academic research or environmental scanning to identify how other institutions are addressing the issue(s). The flaw in

this approach is the assumption that all departmental groups are experiencing the issue in the same way, to the same degree, and the potential solution identified by senior administration is appropriate for their context. As the potential solution is communicated to the college membership, it is situated in departments and begins to take on shades of meaning depending on the departmental contexts and culture. This study illustrates that implementation strategies are adjusted as causal configuration mechanisms are activated and play out.

This study illustrates that when a strategic change decision is made by senior administration, customized implementation strategies need to be designed for departmental contexts, structures, and cultures. Indeed, the prescribed solution may not be appropriate for a specific department. Recognition that, during implementation of a strategic change, each department's unique causal configuration will be activated suggests the need for a consultative, collaborative, participatory, inclusive approach to strategic change implementation, even when the decision for change was not made in a collaborative manner. Without such dialogue about potential solutions and implementation strategies, not all causal mechanisms will be known so that they can be addressed by departmental leaders. In designing the prescriptive Adaptive-Generative Development model for strategic change, Lueddeke recognizes the need for organic and recursive processes that emphasize relationships amongst individuals. In alignment with constructivist learning, collaboration within departments and across departments reveals *to the participants* the activated causal mechanisms, and the participants can determine what counteracting mechanisms to activate. As such, this study confirms that all participants in a change process need to understand and trust the organic nature of implementation strategies. The implementation needs to be fluid and evolving.

Research Question Three: How does the implementation strategy affect the perceptions of college faculty of the initiative within their departmental cultures? How do these perceptions differ amongst departmental cultures?

In this study, perceptions of the change differed amongst the participants in the differing departmental cultures. Kezar and Eckel's (2002a; 2002b) study of institutional change found that the facilitation of sensemaking was an overarching strategy that impacted institutional change

through other core change strategies. Kezar and Eckel employ the definition of sensemaking as "the reciprocal process where people seek information, assign it meaning, and act" (2002b; p. 314). People engage in sensemaking in organizations whether or not it is designed into the change process. Although Kezar and Eckel do not make this conclusion directly, sensemaking and subsequent perceptions vary amongst cultures. If sensemaking is an overarching component of the core strategies they identified and each strategy's application is adapted in distinct cultures, it logically follows that the sense (perception) that was made in each culture was nuanced by that culture.

Change agents and departmental leaders need to be aware that strategies will be enacted in differing ways in differing departmental cultures and that deliberate, planned dialogue to facilitate sensemaking will lead to strategies being enacted in ways that are appropriate to the culture of the department. Planned, facilitated collaboration will enable departmental members to check their perceptions with each other and other members of the college community through cross-departmental teams. Healthy understanding of change processes is promoted.

Research Question Four: How do faculty perceptions of the strategic change implementation impact decisions to participate in the change initiative? How do faculty perceptions and actions change during the implementation of the strategic change and integration of the new structures—processes, procedures, rules, resources—into the departmental context?

This study illustrated that as different strategies were implemented during the change process, faculty perceptions and resulting actions (sense-making) were dependent upon contextual elements, cultural components, and social structures, and which powers were activated. Some departmental leaders had less information available to them or little opportunity to work with departmental colleagues to make sense of that information, thereby limiting departmental members' ability to engage in learning. Additionally, because department heads understood strategic change to be rational, sequential, and holding to a set vision, when the change implementation strategies were applied in different ways or evolved, confusion resulted. In this study, the fluid nature of the change was experienced by some as an indication that there had been a hidden agenda.

The implication is that open discussion and awareness of the fluid nature of the change implementation is needed. All members of a college community need to have a more sophisticated and nuanced understanding of the organic nature of change so that such alterations in contextualization of change processes will not be misread and result in halting adaptive-generative learning.

Leadership Mechanisms and Change

In this section, I address the final research question, "How do leaders of change influence the level of engagement of other faculty in strategic organizational change?"

Leadership is critical to the successful implementation of any change, regardless of its genesis. Leadership with respect to the strategic change must be displayed at all levels of the institution experiencing change. Senior administration must assume responsibility for the effects that their decisions have on faculty and collaborate with faculty groups regarding the change decision and the implementation strategies. Enabling mechanisms such as collegial conversations must be implemented by senior leaders to reduce the power of the mechanism of fear and status needs operating within departments. The deliberate engagement of departmental leaders in sense-making by senior administration would provide knowledge, understanding and a sense of efficacy in leading change. The engagement of senior administration with department heads was absent at LEC. With the exception of annual presentations to the college membership of the business plan, no forum was available for department heads to engage in dialogue with senior administration. All communication was filtered through the bureaucratic channel of departmental deans. At least in part because of this apparent disengagement of senior administration in the implementation and support of their imposed change, the desires and beliefs of the middle management bureaucrats—the deans and department chairs—became instrumental in how faculty experienced the strategic change initiative. Departmental leaders need to be aware of their desires and beliefs (Hedstrom, 2005) and how those desires and beliefs affect the context and mechanisms that their departmental members experience.

The bureaucratic positional power of the role of the dean was relatively unfelt in the departments of Health and Hospitality since for those departments, the position of dean was filled only after the initiation of the project, so the bulk of the leadership fell to the department heads. Having a hampered communication system did cause some barriers—especially for receiving information in a timely fashion—but, generally, the departmental leaders were empowered to take on the implementation of the modularization initiative.

In the Business department, the power of the dean role was clearly experienced by all the participants of this study; although, some were of the inner circle and experienced that power differently than those who were not. Those who only saw the "public face" of the dean received mixed messages and, at times, were uncertain how to act. Most took their cues for their behavior from the departmental inner circle members. However, some followed the lead of other members of the LEC community in other departments and used those peers to help them to make sense of the goals of the project and devise strategies to manage the project. Those participant department leaders who were members of the inner circle were heavily influenced by the hurt and anger felt as a result of the dean being passed over for the position of academic vice-president. Aligning with the dean in passive resistance to the vice-president's project caused them and their departmental staff a great deal of stress, confusion, mixed messages, and low levels of engagement in the modularization initiative.

This experience taught me that close contact and deliberate, planned, ongoing communication between senior administration, change agents and departmental leaders during the decision-making around change initiatives and throughout the term of an initiative is crucial. Such close communication enables sense-making for all participants and ensures that as the change implementation organically changes as institutional members learn more about the nature of the change, all college leaders, from the president to departmental leaders, will be fully aware of the fluid changing nature of the change implementation (Kezar & Eckel, 2002a, 2002b).

Leading Edge College Power Structures

As I interpreted the findings within a critical realist framework, I realized that issues of power and how they activated and affected the mechanisms present in the modularization initiative were not fully addressed. This section interprets the findings with a focus on the regimes of power operating within Leading Edge College. These invoked mechanisms that impacted the modularization initiative. While these sources of power were not dealt with directly in the study, they were present in the milieu of the college.

The president of the college at the time of the modularization initiative was relatively new but had a history of success in meeting the governing boards' goals for the college. The governing board consists of business and industry leaders from the community served by the college. As a result, they are highly supportive of managerialist practices such as fund-raising, marketing programs to students, increasing enrolments, alternative forms of delivery and other "economizing behaviors" (Levin, 2002b). Using a scenario planning process, the president worked with faculty across the college to establish a vision for the college that focused on readying the college for a future of economic growth and prosperity in the province. This resulted in expectations of college staff of heightened performance to take the college "from good to great" and included expectations of the faculty to contribute to the fiscal agenda of the generation of enterprise revenue. These messages were powerful mechanisms that supported engagement with the project for those staff that embraced these expectations such as those in DHosP and operated as powerful supporting mechanisms for resistance of those staff members who did not share the values of marketization of education.

Partially in response to the need for products—courses and modules—to market to business and industry, the academic vice-president initiated the modularization initiative. There was limited time to meet the goals of the project as the academic vice-president contract was initially for three years, followed by a renewal for a further three years. At the time of the announcement of the initiative, the academic vice-president could not be confident that a second term would be granted and thus the timeline for the modularization initiative was set for completion within the first tern of employment. This very tight timeline resulted in a lack of

inclusiveness in the decision to proceed with the project. One would hope that knowing the success of the president's inclusive scenario planning process, the vice-president academic would have chosen to use a similar decision-making process to address the challenges and opportunities perceived by senior administration that could be addressed by modularization. However, the time was not available, the decision was made without any consultation with faculty, and the strategy was pushed down from senior administration onto college members.

Individuals who did not support the modularization initiative felt that if they engaged in passive resistance, the initiative would "go away" when the academic vice-president retired from the college. The limited time to complete the initiative and the desire of the academic vice-president to leave a positive legacy resulted in heavy use of the power of the position to push forward with the initiative with the very tight timelines and goals.

Deans used the power of their positions and their reputations to support the initiative, ensure compliance with targets and timelines, or passively resist the strategic change depending on their personal goals and beliefs. The unintended consequence of the resistance by the dean of the Department of Business Programs was a highly dysfunctional environment resulting in stressed and confused staff. One participant of this study resigned the position as department head as a result of the negative experiences of the role.

Department heads also used the power of their positions and reputations in various ways to encourage or discourage faculty in engagement with the initiative. One department head of the Business department commented that the general feeling of the inner circle of the leadership was to advise departmental members "Relax, these things come and go. You know, this ill wind will blow over...You're naïve. Just relax, don't get all excited about it. Don't waste your resources. Keep your powder dry and wait for the opportunity to make use of your time." Acting on this kind of advice left faculty members scrambling when the message changed to one of urgency and "just get it done."

The modularization team which I led had no bureaucratic structural power over the work of the departments; we had the power vested in the team by the approval of the vice-president academic of our actions and plans. In addition, because all of the team members held masters'

degree in education, the modularization team had the power of the curricular technical skills. This "power of knowledge" gave the team members credibility during the consultation and training activities. As with many constituents in the complex environment of LEC, with some college members—especially in the Business department—academic credentials beyond a baccalaureate degree were positioned as proof that the individual holding them was out of touch with the reality of classroom instructor's experience.

All members of the staff at LEC had personal power regarding their chosen level of engagement with the modularization initiative. Not every individual had the same knowledge of curriculum development or of the targets, goals, processes, and timelines of the project because of information being filtered through the bureaucracy of the college. However, once the individual had awareness of the project, information was available through documents, a website, a helpdesk, and the consultants on the modularization team. The desires, beliefs, and opportunities of each individual guided engagement.

A "Status Needs" Causal Explanation of the Case

As I have illustrated in the previous section, mechanisms operate at many levels of reality. The focus of this study was to understand departmental differences at Leading Edge College in their engagement with strategic change. Based on one common set of causal mechanisms that relate to the departmental status needs, in this section, I explain the differing level of outcomes of engagement with strategic change of the departments at LEC.

A Typology of Social Mechanisms

No explanation of the outcome at the departmental level is complete until causal mechanisms at the micro level of the individual are identified followed by an explanation of how the individuals together generate the outcome (Hedstrom & Swedberg, 1998, p. 22). Hedstrom and Swedberg's typology is discussed in Chapter II and summarized in Table 24.

Table 24: A Typology of Social Mechanisms

Type	Mechanism	Description
One	Situational	Macro states affecting individuals
Two	Action-Formation	Micro desires, beliefs, and opportunities that generate action for individuals
Three	Transformational	The interaction of a collectivity of individuals to create an intended or unintended outcome

In the previous chapters, I gave explanations of the most influential Type 1 and 2 mechanisms that were operating in this study. In this section, I more fully explain the levels of departmental engagement with the modularization initiative based on the most influential set of mechanisms operating with respect to departmental status.

The Departmental Mechanism of Monopolistic Competition: A Situational Mechanism

All of the departments at LEC occupy particular niches in the higher education marketplace that contributes to their status. Leading Edge College graduates receive certificates, diplomas, or journeyman certification. Graduates of the Department of Health Programs and the Hospitality department hold a unique set of skills and are not in competition with graduates of other institutions in the geographic vicinity. This situation does not hold true for the Department of Business Programs; other colleges and universities offer similar programs, and graduates acquire similar skill sets and credentials. DBP is under considerable competitive pressure from other institutions and does not enjoy a monopoly.

Stinchcombe (1998) writes of the mechanism of monopolistic competition as a combination of the mechanisms of monopoly power (such as that enjoyed by DHP and DHosP) and competitive environments (such as experienced by DBP). DBP in its competition with similar departments in other post-secondary institutions for prestige and status in the institutional field suffers as among the lowest prestige institution. However, not only is DBP in competition with

similar departments in other post-secondary institutions for prestige and status but also it has experienced competition within the college for status as the experts on business strategies, market forces, and other concepts operating in the post-secondary institutional field.

The Business department at LEC had been experiencing erosion in its status at the college as the market forces came to bear on tertiary education in the province in the 1990s with the implementation of the Campus Alberta framework and the institution of key performance indicators and other market mechanisms (Barnes, 2003). Prior to that time, the Business department at the college was a major department with the college that enjoyed relationships with decision-makers in businesses in the community. In response to the cutback in funding experienced at that time, the college shifted the functions of the former continuing education department to that of business development to promote relationships with business and industry that would create markets for programs but also to create partnerships to bring resources to the college. Additionally, with the focus on relationships and partnerships with companies in the community, DBP faced stiff competition as business departments in other post-secondary institutions also vied for contributions and partnerships.

The loss of status by DBP was exacerbated by the growth in the ability of other departments at LEC to access contributions and create partnerships in this new market-focused environment. Because the health sector was experiencing a high demand for skilled technical labor, government, health authorities, and other health-related industries eagerly entered into partnerships with the Health department at LEC. DHosP attracted contributions towards capital projects resulting in refurbishing of the department's training labs. Additionally, DHosP's success in international competitions was a great source of pride of the senior administration.

This situational mechanism affected the individuals in the inner circle of department heads in DBP as these department leaders were frustrated at trying to meet the explicit call to create partnerships and bring donations to the college. With the failure of their dean to be successful at the bid for the vice-president academic position, those departmental leaders became hyper-vigilant of perceived "put-downs" with respect to the knowledge and capabilities of departmental members resulting in self-esteem and status issues.

The Department of Hospitality Programs had tensions that resulted in a perception of low departmental status within the college as a result of the low regard held for its curriculum by the Business department. To bolster its status, DHosP sought opportunities in the external environment through engaging in international competitions, adopting national curriculum outcomes, rationalizing its curriculum between apprenticeship and certificate programs to increase the credentialing of the certificate program, and modularizing curriculum with a view of moving into e-learning. Although these activities were largely done with the belief that such market reform behaviors would enhance student success and graduate employability, these situational mechanisms affected departmental members' beliefs in their own self-efficacy and enhanced their self-esteem.

The Department of Health Programs experienced situational mechanisms that served to maintain an already high comfort with the status of the department at LEC and in the broader post-secondary field. DHP's programs are unique in the institutional field of health education with a focus on highly technical skills. DHP's reputation for graduating highly qualified and skilled workers was well-established with high rates of graduate completion and graduate employment. Further, internally to LEC, DHP was recognized as having competent, collaborative, and cooperative staff. The department's high commitment and continued use of TQM principles and processes was a source of pride for the department and the institution.

All of the situational mechanisms outlined led to reasons for individuals to behave the way they did—action-formation mechanisms. Action-formation mechanisms are analogous to sense-making in that they too are about individuals using their desires and beliefs to process information, assign it meaning, and act on the processed information. These will be explored in the next section

Action-Formation Mechanisms

This study was not designed to gather data from large numbers of members of each of the three departments that are the focus of this study because the study's central goal was to better understand the nuances of strategic change engagement by faculty through case study.

As a result, I have extrapolated from the limited data to provide a theory about the desires, beliefs and opportunities of the actors in the department to provide the linkage at the micro level of Type 2 mechanisms—action-formation mechanisms.

As summarized in Chapter 2, Hedstrom (2005) outlines a theory of action-formation mechanisms based on the desires (D), beliefs (B), and opportunities (O) of the actors in a situation to engage in a particular action (Figure 6). Actions are intentional; beliefs are propositions about the world; desires are wishes or wants; opportunities are known "action alternatives."

Within the three departments at LEC that were the focus of this study, the departmental leaders and other members of the departments had beliefs, desires, and opportunities for action available to them with respect to the modularization initiative. I am confident from observing the activity at LEC and from the interview data that the departmental leaders were well informed about the project and formed actions based on causal reasons stemming from *beliefs* about the vision and goals of the initiative and *desires* to gain departmental status and personal self-esteem. I have previously explained many of these Type 2 mechanisms. What requires further explanation is how the actions of the departmental leaders led to the Type 3 mechanisms of this study—the transformational mechanisms—the outcomes of various levels of engagement of departmental members in the modularization initiative. A plausible explanation follows.

Rational Imitation: A Transformational Mechanism

The goal of realist research is to provide a set of reasons (mechanisms) that logically explain a particular regularity in a context that produces an outcome (Pawson & Tilley, 1997). The question regarding Type 3 mechanisms in this study is " Why do individuals in the collectivity of the department tend to behave in a similar way to create a particular regularity of activity that leads to an outcome?" Certainly, the mechanism of similarity of previous industry experience and the habitual behaviors that arise from that experience is one that answers that question. However, the mechanism of previous industry experience leading to departmental conformity has more power in the Health and Hospitality departments because the commonality of previous

experience is high. However, in the Business department, other mechanisms yield more satisfactory explanations.

One of those explanations is the mechanism of rational imitation (Hedstrom, 1998; 2005). Rational imitation is a form of imitation where an actor engages in behavior that is rational—choosing the course of action that is best from the actor's point of view—on the basis of beliefs that have been influenced by the observation of the choices of other actors and lateral interactions. When faculty members in the Department of business programs observed the dean giving mixed messages about the modularization project and observed their departmental leaders giving limited attention to the project, it was rational to decide not to engage with the project. Without knowing the motives or reasons for the departmental leaders' actions, faculty members nonetheless trust that their leaders have good reasons for doing what they do. So, when faced with conflicting messages from departmental leaders and the modularization team about the value of engaging with the modularization initiative, and believing that departmental leaders had access to information that individual instructors did not have, it was rational to imitate their behavior. When given the opportunity to engage in the project in only a minimal way—by having administrative support personnel enter curriculum into the modularization database—and observing others taking that opportunity, faculty rationally imitated that behavior.

Given the demands on faculty time and an environment of mixed messages, minimal compliance was a rational choice for members of DBP. Many other mechanisms supported this decision such as cognitive dissonance over intellectual property issues, concern over not being recognized for contributions to the modularization database when used by others, and comfort with habitual teaching behaviors.

The Dark Side of Managerialist Strategies and Strategic Change

Chandler, Barry & Clark (2002) have examined the human cost of managerialist strategies in higher education in the UK. Their respondents reported that increasing workloads were encroaching on their personal lives and reducing the time that they could spend with their families. The increased emphasis on accountability has led to a sense of increased surveillance

that creates a sense of stress in the faculty. In this study of the modularization initiative at LEC, the use of reporting from the modularization database to monitor progress and the meeting of annual targets for completion was experienced by faculty as surveillance. Other than the completion of course outlines annually, faculty output had not been monitored at the college. Resistance to this monitoring was seen in the actions of the faculty who entered "junk data" into fields in the database to trick the monitoring function into counting a module as complete. The unfortunate result of this is that the individuals suffered the wear and tear of heightened pressure and monitoring of their work once the practice was identified by the modularization team and reported to senior management.

As reported by department heads in this study, Chandler et al. found that department heads attempted to insulate departmental members from some of the pressure that managerialist strategies invoked. In this study, one of the department heads from the business department reported that he entered curriculum data into the modularization database for faculty members, rather than insisting that they do it themselves. This meant that this department head felt pressured into voluntarily increasing his own workload as a strategy for moderating pressures on his departmental members. This particular department head resigned his position and returned to a faculty role at the completion of the modularization initiative, largely as a result of the stress he experienced during the implementation of the strategic change.

Stress in the workplace has been largely seen as the problem of the individual who is suffering the stress. Senior administration in their implementation of managerialist strategies in higher education has largely ignored their responsibility for the stress that the institutional members experience. Indeed, by the use of the "blame the victim" mentality, stress becomes a powerful mechanism of senior management to control individual and collective behavior (Chandler, et al., 2002).

Further, the increased market orientation of educational products—courses, modules, workshops—results in the development of these products to attract valuable fee-paying students (Miller, 1998). In the case of modularization at LEC, online, digital access to course modules was deliberately used in LEC's marketing campaign as a high-tech advantage to attract students. The

ability to attract students allows the institution to gradually heighten the benchmark at which students are accepted. This contributes to a shift in the student population to more capable students at the expense of the disadvantaged learner. Levin (2003b) has observed this movement toward elites and away from communities.

Fowler (2005) in his analysis of higher education faculty attitudes in the UK found that faculty experience a reduction in their level of satisfaction in their roles due to the market-driven view of students as consumers, an increase in managerialism within the institutions, and a reduction in real pay levels due to increasing workloads. In Fowler's study, the move to managerialism and away from a collegial environment has left staff feeling unable to voice dissent over issues. Levin, Kater and Wagoner (2003b) found similar effects on faculty in their study of community colleges in Canada and the United States. Fiscal reallocations and budget cuts have negatively impacted faculty morale such that administrators in the study spoke of a sense of desperation on the part of faculty. As faculty feel increasingly disenfranchised, stress increases resulting in physical and emotional problems.

Miller (1998), states that, in Canada, provincial governments' long term strategy is to align higher education institutions more tightly to business interests and market forces. One of the ways of doing so was through the provincial government's appointment of powerful business and industry leaders to the institution's Board of Governors to guide the institution in alignment with economic forces. Further, such alignment coupled with an institutional emphasis on managerialism and economizing behaviors impacts faculty values (Levin, et al, 2003b) moving them farther from democratic principles, which were fundamental in the early community college movement. Institutional members felt that their institutions were moving away from a purpose of education to that of training—an economic goal rather than a societal goal. Levin, Kater and Wagoner (2003b) postulate that community college faculty, through their increasing exposure to corporate influences in their institutions, are experiencing a socialization that indoctrinates them into a corporate mindset such that they come to identify with the values of the espoused managerial culture. As such, the employees become self-managing and engage in self-censorship so that values and views become homogeneous and dissension is ignored or

eliminated. Faculty personalize the corporate culture resulting in little separation of work from their personal lives.

Although much of institutional change in the past two decades has concerned itself with embedding attitudes, values and practices in alignment with managerialism and market approaches, strategic change is, in itself, not an evil force. Change is inevitable as information and communication technologies "shrink the world," and the forces of globalization affect the economies of the world. Managerialism in higher education is not universally experienced as having negative effects on institutional members (Chandler, Barry & Clark, 2002; Deem, 2003). The negative effects of top-down, imposed, strategic change is due to both the substance and processes of the strategic change. The substance of the strategic change should be decided in a collaborative, collegial way. The processes by which the goals of the strategic change are implemented are critical to ensure reduce potential negative effects on faculty.

Given that change is inevitable and that, in the current environment, top-down strategic change will continue, how can academic managers and leaders facilitate strategic change in a manner that militates against the potential harmful effects? As Balogun and Johnson (2005) observe, management has a responsibility to instigate and lead change in their organizations. Change cannot be escaped and when an institution's governance structure does not allow for academics and departmental members to share in decision making with senior management (Levin, et al, 2006), middle managers still need to be able to effectively and ethically implement top-down change.

Perhaps part of the solution to the challenge of top-down strategic change lies in the promise of the reflexivity of human agents (Archer, 2003). Because agents are reflexive and are able to deliberate both on how others affect them and how they can affect others, agents have the generative power of reflexive authority (Hoogenboom & Ossewaarde, 2005). Individuals in the information age actively engage in understanding and using diverse sources of information. As reflexive actors, they seek to shape their lives and contexts through the power of reflexive authority, rather than accepting their situation as fixed. They are able to question rules and expectations in a reflexive manner to find processes and outcomes that better meets the needs of

all. Hoogenboom and Ossewaarde (2005) define reflexive authority as "the belief in the ability of institutions and actors to negotiate, reconcile and represent arguments, interests, identities and abilities" (p. 614). Since this belief lies in agents within an institution, leaders of change can use reflexive authority to know that negotiated change is not only possible, but also the right path to take. Leaders with reflexive authority have the qualities and abilities to lead change *without knowing in advance* how the collectivities they lead will operationalize the change, nor the final result of the change. The leader and members engaged in the change negotiate and use rules produced *during* the process and work to attain the goals that meet the needs of the collective. This view of change leadership is fundamentally different from rationalist, goal-oriented, "visionary" change, because the final outcome is unknown as actors move into the change. Change leaders engage collectivities in a process through which multiple rationalities can be embraced and through the resultant generative powers an emergent outcome is achieved (Greenwood & Lawrence, 2005). Leading change in this manner takes courage and faith that the outcome that will be reached is exactly the right result for the collective good of the individuals involved. Given that the accepted view of change at this time does not embrace the idea of reflexive authority, how can leaders of change in our bureaucratic institutions engage in leading change that allows their senior management some comfort while meeting the needs of the department engaged in the change? The next section of this dissertation addresses this question.

Implications for Change Agents

In this section, I discuss the implications for change agents foregrounded by this study. Using the dimensions of structure, culture, context, and agency, I provide advice for change agents. Viewing change as a process whose constituents possess emergent powers results in a discussion of the viability of action research as a change management strategy.

The Structure Dimension

Because mechanisms are at work to maintain the status quo, when one embarks on a strategic change initiative, one needs to look at those mechanisms and then invoke or insert structural mechanisms to counteract those that are inhibiting agents' engagement with the strategic change (Pawson & Tilley, 1998). With any planned change in the social structural dimension, one needs to recognize the "I don't know how" mechanism and supply training, mentoring, consulting mechanisms, and so on. Just as good managers attend to the basic needs of their staff, change agents need to attend to these readily identifiable needs for all stakeholder groups by creating or activating the appropriate structures in the change environment. Lueddeke's (1999) prescriptive strategic change model calls for learning—both adaptive and generative—at all stages of the change process. Structures that support ethical and humanistic processes are needed to ensure that potential harm to the participants in a change is reduced.

Structural mechanisms that enable learning must be put into place for all of the stakeholder groups affected by the planned change. Students are often an overlooked stakeholder group when implementing mechanisms for learning in a strategic change. When a strategic change initiative involves students, soliciting student collaboration on the implementation process and identifying student learning needs for the change is important. During the modularization initiative, students were consulted by the modularization team about the design and use of the modules and about student preferences regarding access to the modules as part of the change implementation process. With respect to students learning to effectively access and use the modules, the Health and Hospitality departments both heavily engaged with their students in areas surrounding the modularization initiative. DHosP surveyed students to determine their ability to access the modules online; both DHP and DHosP provided training sessions for students so that they could access the modules online. The Department of Health programs provided seminars for students on how to use the experiential learning model to ensure the effective use of the modules. Student readiness to access and effectively use the modules provided high levels of motivation for faculty to provide high-quality modules. To my knowledge,

interaction with students regarding modules in the Business department was limited to one instructor who surveyed students on their preferences for the format of the modules.

Lueddeke's (1999) Adaptive-Generative Development Model for strategic change in higher education prescribes the use of interactive, inclusive teams to facilitate shared construction of meaning. This study illustrates the importance for departmental leaders to interact with leaders from departments other than their own to provide opportunities for the cross-fertilization of strategies for strategic change implementation. For example, the activities that DHP and DHosP used to gauge and support student readiness may have been helpful for DBP. Interaction between departmental leaders across the college would provide opportunities not only for the exchange of ideas but also for reflection and collaborative problem-solving—two of the required elements that Lueddeke (1999) recognizes in his Adaptive-Generative Development Model of change.

Structures that facilitate opportunities for collaboration should not be limited to departmental leaders. Cross-department teams that collaborate on designing components of the change process, such as campus-wide forums or gathering feedback, encourage engagement and collaboration of faculty. Such activities would be components of the "visible action" core strategy of the institutional change process (Kezar & Eckel, 2002b). In this specific case of modularization, cross-department teams could have been organized around the development of course-specific or subject matter-specific modules in alignment with adaptive learning strategies (Lueddeke, 1999). Opportunities for collaboration also militate against miscommunication and hidden agendas such as were evident in this study.

The Culture Dimension

One of the goals of this study was to determine the nature of the departmental cultures of those departments that were the focus of this research at LEC. In higher education, departmental cultures are often unique based on many historical and contextual factors (Becher & Trowler, 2001). This case confirms that the departmental cultures vary in a college setting. For change agents, this implies that strong attention needs to be paid to departmental culture and the

prevailing logics that may impact a strategic change implementation. This understanding of departmental culture enables change agents to recognize and champion change processes and outcomes that are unique to the departmental culture (Hoogenboom & Ossewaarde, 2005). Change agents need to understand institutional and departmental cultural logics to better present opportunities for strategic change in alignment with prevailing logics (Leca & Naccache, 2006, p. 645) and as such these logics should be one focus of adaptive-generative learning during a change implementation for both change leaders and the institutional community.

As well, there were indications in the data that program subcultures also existed that can impact change implementation. For example, overall, the Health department had a culture of acceptance of standardization and documentation of processes, yet some programs were not as accepting of these processes and questioned many of the modularization activities. These programs required more attention and support to enable adaptive learning and sense-making since they first had to modify processes to ensure that the products of the modularization initiative would meet their program needs.

The Context Dimension

The three departments in this study had contextual element variations that led to differences in how mechanisms became activated and the power of those mechanisms on activation. Pawson and Tilley (1998) emphasize the need for understanding the context of a planned change so that the change agent is confident that the interventions inserted in the context will activate the mechanisms that will lead to the planned outcome. For purposes of this discussion, I will use the concept of "readiness" as a metaphor of differences in the context of the departments.

The Department of Hospitality programs' context was defined by the experience the departmental members had with a previous directive leader. This experience, in combination with challenges to their status and the presentation of a new leadership team who desired to make a difference, meant that there was a high level of readiness in the departmental members' beliefs and desires. However, even setting aside this set of elements, DHosP had a high level of

contextual readiness for the modularization initiative due to a number of other factors. DHosP, because of the nature of its curriculum, already had sets of standard recipes, descriptions of processes for greeting customers, etc. that they stored in a filing cabinet for all to access as needed. This simple contextual element created a cognitive scaffold for departmental members to move to the modularized curriculum stored in a digital "filing cabinet"—a database. The Department of Health programs had standardized course outlines stored in a common set of binders. Both these departments were in a greater state of readiness for modularization of curriculum than the Business department. Archer (1995, p 77) states that "all structures manifest temporal resistance," some more than others. The simple contextual element in this case of the collection and storage of curriculum components at the beginning of the change implementation created differing levels of "temporal resistance" to change; it logically would take more time for DBP to collect, standardize, and modularize the department's curriculum because they had not yet started activities such as DHosP and DHP had.

The implication for change facilitators is that a thorough analysis of the contextual elements and the readiness of the department to engage in a particular change is required. Strategies and mechanisms may have to be designed to address constellations of contextual elements that make up "readiness." As well, the expectations that all departments will be able to adhere to common timelines and targets may be too simplistic in the dynamic and complex environment of higher education. Archer's morphogenetic approach (1995) highlights that differences in contextual configurations at the beginning of a change and the interaction of contextual, social-structural, and cultural timelines would result in high variability amongst programs.

The Agency Dimension

In this section, I will focus on the agency of departmental leaders in response to a top-down call to strategic change that is directive and linear in its change process. Later, in the section on change management and action research, I will discuss how collective agency can be facilitated to lead to strategic change.

Senior management and departmental leaders need to have awareness of how their personal desires and beliefs (Hesketh & Fleetwood, 2006, p. 690) affect the departmental context for the members and how seemingly rational behavior can have catastrophic consequences for faculty. At the senior management level, decision-makers need to be sensitive to the implications for faculty of policy decisions that are made and how these will be experienced by the front line staff. A seemingly simple belief that all faculty should have a post-graduate degree can result in a change of expectations and assumptions that translate to faculty being marginalized and undervalued resulting in heightened stress and anxiety. The more powerful the level of the decision-maker, the more far-reaching and pervasive the effects of leaders desires and beliefs. In this study, the desire by the vice president academic for the modularization initiative to be implemented in the same way, to the same degree, and with the same outcome across all departments in the college resulted in heightened workload, stress, and dissatisfaction of faculty.

In the Department of Business Programs, there were two distinct clusters of programs: the "inner circle" programs and the lower status, marginalized programs. The "inner circle" programs were the large programs with high intakes of students in well-established programs with a long history. The departmental leaders of these programs were all male with long tenure in the department. The lower status, marginalized programs were programs with small intakes of predominantly female students that served business needs for the banking industry and business administrative functions. Departmental leaders of these programs were all female with relatively short tenure in the department. The power of the status need mechanism was experienced quite differently in the two groups with the inner circle having very strong beliefs and feelings about a need for higher status within LEC, while the marginalized programs were somewhat insulated from the need for status within the institution. The implication for change agents is that when implementing strategic change, they need to understand the "beliefs" of the individuals in departments, specifically the departmental leaders, as their beliefs tend to have the most powerful influence on departmental agents. Leaders at all levels need to understand their desires and beliefs and how, without reflection, these could lead to bias. Heifetz (1998, p. 271) calls

leaders to test the accuracy of their own perceptions and appropriateness of their reactions with knowledge of their own beliefs and desires. In this case, understanding the beliefs of the departmental leaders was critical to the successful implementation of the strategic change. For change facilitators, skill in "change management" techniques and strategies is not enough; clear understanding of the effects of personal beliefs and desires of the agents involved is critical. Further, change agents need to support the learning of departmental leaders about their own desires, beliefs, and resulting biases to enable more open, adaptive, or generative change.

Additionally, the inner circle departmental leaders' coming to believe that they did not have the respect of senior administration and their subsequent alignment with the dean in passive resistance to the vice-president's project, caused them and their departmental staff a great deal of stress, confusion, anxiety, and low levels of engagement in the modularization initiative. This experience taught me that close contact between change agents and departmental leaders throughout the term of an initiative is crucial. This is a mechanism to clarify information and provide emotional support as leaders sort through possible responses to the situation. Such support could provide the linkages to facilitate adaptive-generative learning on the part of both the departmental change leaders and the change agent(s).

Influencing Actors' Beliefs

It would be naïve to assume that every policy implementation would capture the beliefs of all departmental leaders. The question then for the change agent is how to help departmental leaders as they are tasked with leading a strategic change implementation that they do not necessarily believe in. The participants in this study provided strategies that they used to deal with this challenge. Many spoke of the strategy of seeking personal value in the change through conversation with others. The use of leadership retreats by the departments of Health and Hospitality provided opportunities for sense-making and introspection for the two departments; the Business department had no analogous activity (Kezar & Eckel, 2002, p. 445). Other participants spoke of the strategy of suspending their reservations and adopting the change *as if they believed in it* and then discovering that as they engaged with the change, they did find value and came to support the strategic change. This is a method for individuals to reduce cognitive

dissonance due to conflicting beliefs or cognitions and often operates below the conscious level of individuals (Hedstrom, 2005, p. 41). It is interesting that departmental leaders spoke of using this strategy consciously. The implication for change leaders is to work with departmental leaders to explore the nature of the conflict and find ways to address the conflict. If the conflict cannot be addressed satisfactorily, the change leader needs to support the department head in finding strategies to lead the strategic change implementation that reduces their stress level due to conflicting beliefs and desires (Heifetz, 1998, p. 273). Change "managers" need to be change "coaches," finding strategies that work for departmental leaders and coaching them in their use.

Strategic change leaders and departmental leaders need to be aware of the power of the mechanism of rational imitation and provide opportunities for departmental members to see departmental leaders actively engaged in working through issues around the strategic change implementation. Department level visioning activities, workshops, and staff meetings can provide a venue for this (Kezar & Eckel, 2002a; 2002b). These activities also provide opportunities for departments to become more socially integrated (Domingues, 2000) and to develop a sense of camaraderie in the department.

Change agents and departmental leaders of strategic change need to *pay attention* to an initiative if it is going to succeed (Heifetz, 1998, p. 260). They need to check in regularly with staff to determine the needs that they have around the project. Conversation is an important change strategy to facilitate individuals' understanding of a change initiative, but it also provides opportunities for faculty to observe the departmental leader paying attention to the project. The result is that departmental members also pay attention. One of the tasks of a change agent is to initiate and maintain conversations amongst departmental groups (Balogun & Johnson, 2005; Ford, 1999). Both DHosP and DHP had the modularization initiative as part of the standing agenda of all staff meetings. I did not see any evidence of the continuity of conversations regarding the modularization initiative in the Business department.

The nurturing of a change initiative through paying an appropriate level of attention and ensuring conversations occur can enhance individual's sense-making (Weick, 1995), encourage and support the reflective process (Archer, 2000; Heifetz, 1998), and increase a sense of

collegiality. Departmental leaders should nurture collegiality through the use of teams in change engagement. This "high involvement management" (Bowling, 2006) can lead to feelings of efficacy in dealing with change implementations. The use of teams enhances the positive effects of imitation and can help overcome individual limitations in thinking and create synergy in skill sets (Mutch, 2000, p. 160). Departmental members can be encouraged to express their doubts, fears, beliefs, and desires (Manz & Neck, 1995, p. 12), and group members can collectively create strategies to address both the challenges of the strategic change initiative and the mechanisms that may be creating a dysfunctional environment for change, including modifying components of the new managerial practices to better suit the academic environment (Trowler, 2000, p. 193).

Change as Process—Emergent Powers

Structural, cultural, and agential powers that emerge during a strategic change initiative at times yield changes in vision, present unforeseen barriers to meeting the needs of faculty and learners, or provide unforeseen opportunities to improve faculty and learner experiences. The role of the change leaders is to recognize these adaptive emergent powers and work with departmental members to make them more salient and applicable for the department (Weick & Quinn, 1999, p. 381). Departmental change leaders need to recognize that a change implementation is a process. It unfolds and makes itself known as it emerges. Change leaders need to provide stability to a change initiative by engaging faculty members in conversations about the unfolding nature of the change with opportunities for faculty to devise alternative strategies and outcomes (Eckel & Kezar, 2003, p. 46).

This study illustrates that mechanisms operating in a context can create opportunities that can be seized upon and alter the direction and scope of the initial vision. At the beginning of a large change initiative, this growth and adaptation of the vision has to be emphasized so that all participants realize that changes in the vision are not due to "hidden agendas" but rather due to the nature of the interplay of mechanisms. Alerting all members of the change community when these changes occur and describing how they occurred is important so that members do not feel

"blind-sided" as the vision grows. This finding supports Lueddeke's Adaptive-Generative Development model (1999) with its prescription of ensuring that actors in a strategic change initiative engage in experiential and dynamic praxis—including learning about the nature of change itself—to better cope with the change process.

It is critical that policy makers gain a better understanding of the nature of change as nuanced, turbulent, complex, and emergent (Fullan, 1999). Policy that prescribes the steps to be taken in the process of change is problematic in its approach. That is, the assumptions guiding policy implementation are often based on a view of change as rational, linear, and controllable. This study shows that variations of context, culture, and structure affect actors' engagement with change and that, although the goal(s) of policy implementation may be consistent, the outcome of the implementation will be adapted to the local context (Dyer, 1999). Recognition of this reality means that policy makers need to define the issue(s) and work with the change community to negotiate these local adaptations to the goal(s) of the policy. The implementation community must then be encouraged to engage in adaptive and generative learning to address the issue(s) and determine appropriate implementation strategies to meet the goal(s) in their localized context and culture (Lueddeke, 1999). Policy makers need to collaborate with the implementation community to address the defined issue appropriately. The challenge is the overwhelming amount of change that needs to be addressed and the amount of time and energy it demands of both the policy makers and implementation community to engage in authentic consultation. However, without authentic engagement, creative and unique solutions to issues remain undiscovered.

Change Management as Action Research

In a turbulent world, with the effects of globalization and disruptive technologies, the understanding of mechanisms that engender and support healthy and human-friendly processes that lead to sustainable outcomes is critical. I postulate that in many environments, but certainly in the environment of higher education, change that takes the form of action research holds the promise for such positive change. Such an approach to change allows actors to work collectively to uncover barriers to their goal(s) and address them appropriately (Heracleous, 2002, p. 255).

Working collectively enables agents the opportunity to construct a vision to which they have commitment and one that can generate passion and motivation that supports the morphogenesis of social structures and cultural components (Shilling, 1997, p. 749). "Agents have to diagnose their situations, they have to identify their own interests and they must design projects they deem appropriate to attaining their ends" (Archer, 2003, p. 9). Through reflexivity in the change process, actors can redefine their beliefs and desires (Archer, 2003; Mutch, 2004a). Using action research as a methodology for dealing with change allows faculty to engage in a more democratic and inclusive approach to change. Democratic change through an action research model allows faculty to engage in change as a professional challenge rather than fearing it as a top-down threat to the status quo (Evans, 2000). Supporting action research as a methodology has the potential to create a change open departmental culture. Faculty and departmental leaders need to be trained and supported in their action research efforts, and reports of the activities need to be communicated throughout the college to honor this work as a high status, professional activity that adds value to the broader college environment. As such, action research can use the power of departmental structures and cultures as powerful mechanisms of change (Walvoord, Fassler, Kirwan, & Smith, 2000).

Akroyd (2004 p 160) argues that action research is the opportunity to intervene in processes and to redirect the powers of mechanisms operating within groups. As individuals engage with a change challenge, through conversation and active engagement with the challenge, mechanisms will emerge that can impact actors' desires, beliefs, and opportunities to act. "Realist action research will involve not simply attempting to change situations within limits set by a preset desired outcome, but testing the extent that typical generative mechanisms can be changed by re-engineering the outlook, beliefs and attitudes of participants" (Akroyd, 2004, p. 160). Action research involves human agency constructing the conditions such that the real and actual domains can be fitted together to result in a pattern of events that leads to desired outcomes (Tsoukas, 2001).

Mutch (2004b) speaks of a "revolt" in organizations regarding strategic planning and the techno-rational approach to implementing that plan. He refers to strategy being "emergent in

nature, with emphasis being placed on the quality of the process" (¶4). The findings of this study support the view of this emergent nature; mechanisms were triggered, and the implementation strategy unfolded as a result. The process of the implementation defined the implementation. Strategic change should address a problem, but the outcome of the solution should not necessarily be defined in advance of working directly with those actors who implement the solution in their unique context. Because emergent social and cultural properties have emergent powers, once created, these properties influence further interaction between agents (Tezcan, 2006), so new capacities and visions emerge. Action research allows participants to understand and own these emerging capacities and visions. Further, work can be done by the change leaders to determine the best departmental context within an institution to initiate the action research project. Battilana (2006) makes a compelling case for determining conditions under which agents are more likely to engage in "institutional entrepreneurship"—engagement with change. Change agents must gather evidence of those conditions as they initiate and bring to fruition action research projects of change.

In this case, because the Department of Business Programs started with a context that wasn't open to top-down strategic change, exacerbated by beliefs that faculty were not respected, using action research could have been successful. Presenting the faculty and departmental leaders with the true problems perceived by senior administration: challenges of e-learning and of marketization of courses to generate income, as well as flexibility and agility to create customized courses, etc., rather than the perceived solution (modularization) may have generated alternative solutions to the challenge (Simsek & Aytemiz, 1998, p. 176). By presenting a problem, senior administration could have engaged faculty in finding a solution to the problem from the inception of the strategic change rather than being excluded from the decision making process. A less democratic and compelling alternative would be that, upon presenting the challenge of "Leading Edge College will be modularized within three years" by the academic vice-president, faculty and departmental leaders could be engaged in a full consultation about how best to achieve that task in the timeline outlined. Such a consultation could have provided alternative mechanisms for meeting the challenge. Tools such as the modularization software and curriculum database could

have been made available, but engaging critical leaders from the Business department in the design of the application and training for its use could have made engagement with the modularization initiative more attractive. The critical issue for DBP was that departmental leaders were neither consulted nor engaged in determining whether the initiative addressed a legitimate problem in their department. As a result, the departmental leaders neither saw a need for the project nor had any agreement with the processes and software application designed to meet the goals of the project (Harley, Wright, Hall, & Dery, 2006, p. 73). Working with faculty in an action research mode to determine the best way to meet the challenge of the modularization initiative could have provided motivation and clarified how the project could align with actors' desires and beliefs. The use of hard bureaucratic mechanisms such as performance agreements to ensure implementation activity are currently seen to have a place in the bureaucratic, managerial structures of higher education, but there are strong indications that this method of managing professionals is counter-productive as it increases resentment, reduces motivation, and hinders innovation. Nurturing change through early involvement of departmental leaders and faculty members in decisions regarding the necessity, nature, and processes of a strategic change implementation and the use of action research to implement the change rather than mandating it through performance agreements is more in alignment with both how the change process works and the collegial culture of higher education.

Additionally, from a broader perspective, college leaders must guard against the tendency to revert to hard bureaucratic structures and mechanisms as they attempt to manage the turbulence that is the reality of the 21st century. Heightening bureaucratic control, standardizing work processes, reinforcing the interchangeability of faculty members are all examples of reverting to a techno-rational approach (Karreman, Sveningsson, & Alvesson, 2003) that inhibits transformation of teaching and learning in higher education. Change leaders must be willing to work with higher education professionals to explore, through action research, structures and mechanisms that will support the challenges of teaching and learning in an age of globalization and disruptive technologies.

Contribution and Further Research Opportunities

This study contributes to the research literature, both methodologically and substantively, using a critical realist perspective and analytical and explanatory frameworks to address strategic change in a higher education institution.

The adaptation of Pawson and Tilley's (1998) Context, Mechanism, and Outcome (CMO) analytical construct to include cultural components created the opportunity to better understand the forces at play in the departments in this study. Use of this modified model could enhance evaluation research that employs it by providing understanding of the complex effects of culture on program implementation. Further, the inclusion in the analysis of both cultural and social-structural mechanisms analogously illustrates Archer's (1996) contention that a deeper understanding and more nuanced explanation develops with this type of analysis.

Comparing three different departments embedded in the same institutional context provided the opportunity for insights into the complex interrelationship of mechanisms in different contexts. Research about change in contextualized environments is needed to better understand how the effects of change mechanisms' effects are realized in the complex causal configurations that can be operating in different contexts (Pettigrew, Woodman, & Cameron, 2001, p. 698).

Additionally, overlaying the concept of morphogenesis to create timelines led to greater understanding of the emergence of mechanisms during the three years of the strategic change implementation. The investigation into the temporal nature of the change implementation revealed the organic, unfolding nature of the expectations of the outcomes of the strategic change initiative and adaptation of the various departments to processes and products of the change initiative. More research is called for that recognizes the temporal nature of change (Pettigrew, et al., 2001, p. 700). Further study needs to be done to reveal whether this phenomenon of an unfolding, organic vision occurs in other strategic change initiatives. Other questions also arise: Is this phenomenon limited to higher education strategic change initiatives? Is this organic vision typical of technology implementations? How can such an understanding of the nature of change as organic be harnessed for transformation?

Further study would add to the realist temporal evidence regarding the morphogenetic approach advocated by Margaret Archer (1995). A second study could be done to investigate the nature of any socio-structural and cultural changes that have occurred in the departments at LEC due to the modularization initiative in the time since the completion of the implementation.

Further research that applies the departmental causal configurations revealed in this study to other initiatives within the same departments and institution to determine how the causal configuration changes or what constituents are persistent in other change initiatives in these departments would add to the knowledge about change in higher education.

I previously postulated that in the environment of higher education, change that takes the form of action research holds promise. The opposite is also true: action research about change holds great promise for better understanding of how change can be most effectively implemented in higher education environments (Pettigrew, et al, 2001, 705). An action research study with the morphogenetic analytical frame would provide rich data about both the efficacy of action research as a modality for change in higher education and the nature of change in higher education.

Technology may have unique emergent powers that we are just starting to understand (Mutch, 2002, 2004b; Orlikowski, 1992, 2000). Introduction of a strategic change that involves technology has emergent aspects that we are only beginning to acknowledge. In the past, technology was often treated as just another element in the overall change environment, but it is more than that. Change agents need to be aware of the "dual nature" of technology (Orlikowski, 1992) to impact human responses to change. Is technology simply an enabling tool? Or is it more complex? Does it open up space for flexibility and innovation in organizations? Although this study did not foreground the effects of the modularization software, its effects were felt by all the departments. The ability of the modularization software to allow faculty to see others' curriculum could encourage more cooperative and collaborative relationships in the college (Schultze & Orlikowski, 2004). Alternatively, the modularization software could be used to monitor faculty activities and productivity. Much more research needs to be done in the area of technology and change in organizations from a realist perspective to flesh out the nuances of the emergent powers of technology.

This research contributes to the literature on change in higher education by uncovering some of the cultural components and socio-structural elements that affect episodic and ongoing change. This work is critical if we are to address the "alienation from, opposition to, and effective change of, curricular and other policies" (Trowler, 1998 p. 152). The study revealed the need for change leaders to be aware of status need when working with higher education faculty and to honor those needs in the methodology of change management. Further, the strong effects of contextual elements like collective previous employment experience (O'Connor, 2000) or preferred teaching and learning logic that were uncovered in this study are also important factors to consider. The tracing of causal mechanisms in this study adds to our knowledge of how regularities in change implementation come about, thereby contributing to the burgeoning theory on organizational change (Freyberg-Inan, 2006, p. 8). Further research should be done on change at the department level to uncover more departmental causal configurations and to discern if there are "typical" causal configurations or if certain components regularly occur in departmental causal configurations. An expansion of this study would be to study change in the remaining departments of the institution to see what differences and similarities might be found across the institution. Further study could be done on change in departments of Health, Hospitality, and Business at other colleges to determine if there are regularities in causal configurations that are common to discipline-specific academic departments. Various families of configurations can be compared to build typologies and, over time, theory.

The use of a critical realist analytical framework does not reduce the complexity of our understanding of change to enable a typical step-by-step prescriptive model of change processes such as strategic planning processes suggest. Rather, the use of critical realism highlights the contingent, organic, and systemic nature of change. The nature of change points to the need for change processes that rely heavily on collaborative, constructivist processes. Lueddeke's model incorporates elements that address the complex nature of change with processes that are well-suited to the higher education environment. Further the adaptive and generative processes encompassed in the Adaptive-Generative Development model address the agency-level, action-formation mechanisms that so powerfully affect change implementation.

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APPENDIX A. INTERVIEW GUIDE

INTERVIEW GUIDE

General

1. What causes organizational change? How does change occur here at LEC? Do you think that the changes that happen at LEC support LEC's strategic vision?
2. Is change at LEC recorded in the business plan? Are there strategies in the business plan to operationalize the business plan?
3. Describe for me the intended consequences that happen as a result of the implementation of the business plan strategies. Are there any unintended consequences that happen as a result of strategies to support strategic vision
4. How are you called to engage with these activities – what's the protocol? How do you first find out about the activities that you'll be called to implement?
5. How do you communicate these activities to your instructors?
6. Do you experience competing priorities? How do you plan for and mediate amongst competing priorities?
7. In your experience, do individuals in your department generally engage with change or do they resist change?
8. In your experience, do individuals in your department generally engage with change or do they resist change? Do you think the dept's past history with the Total Quality Management strategic change implementation affects individuals' openness to strategic change implementation? How?

Catalysts to Change Engagement - General

9. What strategies do you use to help others to "own" or engage with a change strategic initiative. Do you have any strategies that you haven't tried, but would like to try to help your department effectively engage with change?
10. Do you think that anyone can truly 'own' a change which is decreed and implemented by others? Is there a better way?
11. In your opinion, what strategies enable the effective implementation of a strategic change initiative across multiple departments/schools here at LEC?

Departmental Goal

12. When you think your department's ideal status (reputation, distinguishing features) would be in relation to other departments at LEC?
13. How would you like your department spoken about by the rest of LEC?
14. Do you think your staff would answer these two questions in the same way you have? How do you know – what is the evidence?

Technical and Political Factors for the Modularization Case

15. Was there enough support given to your department to be able to effectively engage with the Modularization Project? (Technical support, training, workload relief, etc.)
16. Did you believe that engagement with the Modularization Project would affect your prestige or power in your department or the wider LEC context? Did you consider what other people (your Dean, the Modularization team, administration, your departmental staff) would think of you if you supported the change (or resisted the change)? In your opinion, did people in your department perceive that engagement with the Modularization Project would affect their prestige or power in the department? How?

17. Did you believe that engagement with Modularization would affect your career opportunities – potential for advancement? Did people in your department perceive that engagement with Modularization would affect their career opportunities or possibility of advancement?
18. Was there any recognition given to you for your engagement with the Modularization Project? Was there any recognition given to folks in your department to praise them (or show disappointment) about their level of engagement with the Modularization Project?
19. Were people who engaged with the Modularization Project admired and complimented or shunned by their peers?

Individual Leaders' Engagement with Change

20. What did you think of the Modularization teams' implementation strategy? (Remember – Modularization breakfast – communication of Program Map activity – move program map to the curriculum database – implement basic computer training for those folks who need it – ask PH's/Deans to id people who will receive Modularization training the first year – setting Modularization goals of 20% Yr 1, 60%, 100%).
21. How did the Modularization teams' implementation strategy affect your decision to encourage your staff to engage with Modularization? Did you adopt the Modularization teams' implementation plan for your dept?
22. How did your perceptions of the Modularization Project change during the implementation of the strategic change and integration of the new processes and procedures into the organizational context? Can you id critical factors that caused you to decide to engage with the Modularization Project? (For example: Modularization status reports, requirement/opportunity to create course outlines in the curriculum database, requirement to publish course outlines/courses to Modules Online, requirement for a course to be modularized and then loaded to get a WebCT course, etc.)
23. What factors do you think would have caused you to engage more readily with Modularization?

Change Implementation Strategy

24. How did you devise an initial implementation strategy for the Modularization Project? What special features of your department did you consider as you designed your change implementations strategy?
25. How did you monitor progress with the implementation? Did your implementation plan include the strategies to monitor progress? Did your strategy for monitoring progress change over the term of the project?
26. Did your implementation strategy change over the past four years? If so, how did it change? What factors caused the implementation strategy to be altered?
27. How did the individuals in your department respond to the implementation strategy? How did your strategy affect the perceptions of the individuals in your department about Modularization?

Context/Cultural Factors

28. What unique characteristics that your department has affected the level of engagement with the Modularization Project? E.g. Education level of faculty, age, gender, shared beliefs, work processes (how we do things around here).
29. What factors seemed to influence the level of engagement of faculty with Modularization?
30. Were there any individuals who seemed to influence the level of engagement of others with Modularization?

Change Leadership

31. How do you perceive the influence that leaders of change had on the level of engagement of faculty in strategic organizational change? Program Heads, Curriculum Consultants, Modularization Project Leader (myself), Dean, Academic VP, and President, anyone else?
32. How did the actions of other leaders of change affect your level of engagement with the Modularization Project?

Faculty Perceptions & Sensemaking

33. Are the members of your department cohesive in their perception of strategic organizational change? Does everyone support Modularization? Does everyone engage with Modularization to the same degree?
34. How do people make sense of the change that is asked of them? How do they rationalize their engagement with the Modularization Project? What is the "scuttlebutt" about Modularization in the department and how does it affect people's Modularization activity.
35. What kinds of stories do people in your department tell about Modularization? Tell me a "sample" story.

Resistance to Change

36. Have you observed resistance to Modularization in your department?
37. How do/did people show their resistance to Modularization?
38. Has the nature of the resistance changed over time?
39. Has it decreased/increased over time?

Tipping Point

40. Was there a point at which it seemed that the project or initiative tipped over into something that people engaged with? When did that occur? What seemed to be the catalyst for the change in attitude or behaviour you observed as a "tipping point"?
41. What was the one strategy or activity that seemed to most positively affect the level of engagement of your departmental members with Modularization?

Structure and Agency

42. Did you feel that there were structures at LEC – policies, departmental culture, habitual stances, etc – that either interfered with your engagement with the Modularization Project or perhaps encouraged/motivated your engagement with Modularization?
43. Do you feel that you have the ability to affect change? Do behaviour/actions/conversations affect your engagement with change? Others engagement with change? Leading others to engage with change?
44. Do you spend time thinking about how to better lead change? Does your reflection enable you to better deal with change? Lead others in engagement with change?

APPENDIX B. DOCUMENTS TO SUPPORT FOCUS GROUP

Focus Group Activity Guide

Purpose: The purpose of the retreat is to give individuals the time for reflective writing and open communication. The questions to be addressed are driven by the interview data.

The group will address the relationship between mechanisms, structures and cultures to better understand the interaction between such contextual variables as departmental visions in interaction with institutional strategic vision.

Participants will engage in writing and dialogue about their engagement with change and their experiences leading change.

In addition to guiding the participants to reflect on the past, I will also pose the questions about the future directions of the strategic changes occurring at the college. Gathering information about participants' views of the future may reveal assumptions and allows me to gain a new viewpoint of their concept of the present. This strategy is a form of triangulation as it checks the consistency of the sense participants have made of the past, what they say about the present, and their predictions of the future.

Gather from participants their current view of the "state of the union" with respect to the modularization initiative.... of the use of the resultant products (modules), the posting of the modules to the web for student use, the use of the modularization software to create standard course outlines, etc.

Solicit viewpoints as to the future of modularization initiative, use of the modules & student use of the modules online

Engage participants in a discussion about the Interaction between personal and departmental visions of the future and engagement with strategic change.

Hand out reflective writing guide. Have participants engage in reflective writing for 20 minutes or so.

Engage participants in discussion and share insights they gained from their input in the reflective writing guide. **Capture** on flipchart

Distribute draft documentation of barriers and catalysts to strategic change. Have participants put an A "Agree" or D "Disagree" beside the number or letter of the point. Have them complete the question regarding departmental culture at the end of the document.

Engage participants in a discussion regarding the barriers and catalysts by asking – is there anything that surprised you? What did you disagree with?

Engage participants in a discussion regarding departmental culture.

Solicit recommendations to the executive team of the college regarding strategic change initiative implementation. What should LEC do to support program leaders in leading institutional strategic change in their programs? Is there a structure that should be created? Is there an existing structure that could be used effectively to better support program leaders? **Capture** on flip chart.

Interview Validation Document

Barriers and Catalysts to Change

Leadership

1. Senior level leadership (Senior administration: president, vice-president academic, etc.) was a critical support piece. VP Academic "made it very clear that this (the strategic change) is going to happen" to program leaders at department leadership team meetings SG4L. "both (the academic vice-president) and (the president) ... set that (the strategic change) in motion and it kept going and nobody ever backed down." SG5L
2. Leadership of the Dean cannot be underestimated. In this study, the role of the dean was clearly either a barrier or a catalyst to change at the program level. "They are so very critical that they are LEC - that LEC is the deans... the structure at LEC is based on that operational CEO." SP2H
3. In some cases the dean was seen as absent (either due to real absence or due to lack of engagement of the dean with either the strategic change or the program) and this was seen as a clear handicap in the program leader's ability to engage with strategic change and to lead strategic change in the program.
4. The leadership of the Department Head is crucial. "The real major crux for moving strategic change forward is the department leader" (from) PG2L

Resources

1. Implementation of strategic change (as with all kinds of change) requires attention to needed resources. In this study, the critical resources identified as barriers (and catalysts) depending on whether they were supplied or not were:
    a. Computers capable of handling the software that was used as a tool in the project
    b. Time on the part of leaders to plan and engage with the change early in the strategic initiative
    c. Time on the part of faculty to engage in the thinking and doing of the initiative
    d. Robust software capable of aiding individuals in getting the job done.
    e. In this study, the software gave the flexibility of individuals to do the work from home which was appreciated (and seen as a catalyst) by faculty and program leaders.
    f. Some aspects of the software were seen as problematic – e.g. The concern about the safety of the data; concern about others using an individual's work; ability of software to embed pictures etc.

Communication

1. Communication was limited and unclear at the early stages of the project. Generally, upon probing, the reas`on for this seemed to be that leaders did not engage (were not able to engage) early enough with the project to be able to clearly communicate goals, vision, implementation plans, strategies for moving the change forward, etc. to those they needed to communicate to. This was true at every level – from the Academic VP to Dean to Department Head.
2. Passive or active resistance on the part of the leader communicated to faculty caused faculty to not engage with change until there was heightened pressure. Active: If a program leader says "'You know what, (Joe/Jane), what a bunch of crap. We've done this bullshit all the time.' you can't really expect him to get on board!" SG4H Passive: "And it was (a leader) who said I fought and fought for you guys to not have to do this... I'm not sure that (the leader) was on side..." (SG5L)
3. Sustained regular communication is a catalyst. "So the weekly meetings, regular meetings with the dean, with the leadership...on a weekly basis and (the dean) says this is what's coming down from senior administration, blah-blah-blah. And occasionally – very seldom do I hear or see something over 'all users' before I know about it" SG3H "the process of putting the modularization project as a number one priority in the school. So it didn't matter what

white board you looked at, what handout you looked at, what set of meeting minutes you looked at, whether they were leadership or whether they were at the instructor level, or it didn't matter what cluster meeting you went to, on every agenda item absolutely everywhere modularization was a topic. So what it conveyed to the staff was that it was an important piece of work that we needed to do here at LEC." SG3H

Introducing and sustaining communication around the change. "I guess for me -- communicating is very important. I would send any e-mail that I thought at all appropriate to send I would forward to staff -- just FYI and then, at staff meetings I'd start small and just give a little overview and then I'd get bigger and just use repetition." PG1H "People need to hear it not once, not five times, but 50 times? ES "Yes (people need to be) conscious -- because otherwise to me what happens is if I don't sort of do that little bit of information (constantly), all of a sudden it has to be in their face because all of a sudden it's a deadline. And then that's when I think that you hit resistance." PG1H

4. Criteria and expectations are catalysts when provided, a barrier when not. However, the criteria and expectations can also be a barrier when "dictated." Leaders need to work with individuals to provide expectations and criteria for the "product;" often these are developed in consultation with the individual who has one set of expertise (in this case, subject-matter) and the leader has another set – the ability to facilitate focus, problem solving, strategizing, accessing other resources, etc.
5. Providing targets and timelines was helpful.

When asked what was the tipping point that got people to engage, the response was "directive that came down in terms of what had to be done by certain times" got people working. PG2L.
"the setting of the targets and your communication and adherence to those targets made the modularization project pretty straightforward for you?" ES. Response "Yes." SG4H

"My (leader) would remind us and we generally know what things are the things that have to be done and (the leader is) usually pretty good at giving us reasonable time lines" SG5L

6. Leaders who involve their staff regularly in setting direction and working on change and improvement encounter far fewer problems when implementing strategic level change. "We're sure to involve every one of our staff in every directive that comes through this office" SG3H
7. Leaders need to have the skill to work collaboratively with faculty, but also the confidence to know when it is time to be more directive. "You've hired people as an expert so you can't discount what they're doing. But then you've got the things out here that you see in the environment, I'm telling them a bunch of things so I've got a broader scope than the individual instructor has so I try to manage that and the bottom line is at some point if I can't get people to come on board with that vision, I'm paid in this job to have that vision and I make the decision and if they don't like it, that's tough." SG3L
8. Leaders having early hands-on experience with the strategic change gave them confidence and skill to help others to engage.
"I felt really involved with it (modularization), so I would say things like 'Okay, I must be a real loser, but I actually like working in the modularization software application. I don't know what's wrong with me!' Instructors would be joking about it.." PG1H "You had a lot of personal agency around the project because you were engaged early. Learned -- had some profound experience with it (modulariztion) that allowed you to have some real, basic knowledge so people couldn't snow you." ES "That's right, exactly. Exactly." PG1H

"Actually getting into it, doing them myself" SG4L gave me the knowledge to help others to engage with the change.

9. Leaders who worked directly with faculty experienced higher levels of engagement and less resistance.

"I walked around and asked people. 'Hey, how are you doing? What's going on?' Then I'd

get the report and go 'hey, you're only at 70 percent. I need you at 100.' I'd just encourage them gently. I'd say 'why don't you phone and find out why you're only at 96. There must be a reason. There must be four little things that you haven't done.'" SP4H

"I would say, 'Okay, are you confident that you're going to go into the modularization application, and are you confident to go into this modularization project? Are you trained? Do you feel good?' 'Oh, yeah, I feel great. Okay. Go into the modularization application and show me around, just..' – and they'd go, 'I don't know my password'..... When they would say I don't know my PIN number, I said 'If you don't know your PIN number or password you haven't been to the modularization application enough and you're not ready. So let's go to in-service,' and I would go (with them) and they would take all their training again." SG3H

10. When communication was viewed as partial or a "spin" there was distrust.

"I think what ticks people off lots is if the administration plays games. People don't like people who play games; they don't like games being played. So if you're trying to convince me to participate or whatever and schmooze me, go away.... Why should you have secrets?" SG3L

"So, for example, it seemed that we got a little tiny piece and we really didn't know where that tiny piece fitted into the whole puzzle. So we were seeing pieces, but we never ever saw the completed puzzle. So therefore we had all kinds of mixed messages. You know, what's their **real** reason for doing this?" SG3L

11. Communication style seemed to vary depending on the skill/style of the program leader and the leader's perception of their faculty's communication need. Catalytic strategies were:
    a. Choosing not to communicate other program areas resistance to the strategic change. "Why would I tell them that (Program X) doesn't want to do it or 'so and so' is bucking the system. I never ever brought that up" SG4H
    b. Approaching the strategic change as very matter-of-fact. "I just presented it as 'We are doing this. Here is where we are moving. Here is what you are doing. Thank you.'... Presented it as 'we've been doing it anyway,' and it was not even as if it was anything different... I put (a faculty member) in charge of (modularization) and he got the technical end. We made it as if it was just an every day thing." SG4H
    c. Getting faculty involved very early – as soon as you see a strategic change coming.

    "get them (faculty) involved for ownership when I know I need ownership as early as possible because... we get too far down the line too fast when we're seeing this change, we've overcome all the things (questions/reservations) and then as we go to take it to the (faculty) it's like they're still way back at the beginning and they don't know how we got to where we got to; whereas if you can go with them, bring them with you, it's a whole lot easier in the end because you're all working at it together, you're getting the other people's input from all directions." SG5L

    "So as leadership, not only do you see a challenge coming down the road, you have to even go further back and say, if we get to this situation what type of change are we going to see? So well before the change even gets brought up, before that bring it up to your staff. Start them thinking, going the other way. Say drive the road down -- or drive the car down Road 'B' instead of 'A'. Well what if we go to 'C' or 'D', what do you think will happen? But you may know that this change is on the horizon, bring your staff in as soon as you can." SG3H
    d. Providing appropriate contextual bridge to the strategic change. Starting with the faculty's current reality, bring them to where they can see the connection between their current context and the strategic change.

    "I sold it to them this way: Wouldn't it be nice if you were to go teach a class on (a topic) and you could just walk by the filing cabinet and pick out a module and it didn't matter where you were teaching it, with (Program 1, 2, or 3), you would have it and

we could all share it. We could all put in ideas. (Staff said) 'Well, that would be (great) -- that's what we should do.' Okay, now just think electronically. See, we have that, we have the modularization database. That's what the modularization database will do for us.... wouldn't it be nice if we had this one room that had 'A' to 'Z' about everything we teach and it was in all in order and organized and we could just pluck it out and once it was developed, for the most part, you really wouldn't have to develop a lot of the curriculum again" SG3H

e. Positioning the engagement as a developmental opportunity. "When you go back to the original reason for modularization as a curriculum development tool for an educator, they needed to engage" SG2H
f. The leader openly acknowledges the negatives and solicits solutions/positives.

Question: "So do you think ever that you might do damage to people's level of engagement with change if you tell them your doubts?" ES
Answer: "No, because sometimes then (the faculty) come back at me and say yes, but look at it this way, maybe it will be useful some other way. There's some organizational behavior concept on that one, but I've forgotten the name of it, but it's 'inoculation.' It forces people to say oh, but, look at the other side of it. So you give them a little bit of the negative in order for them to have an inoculation against (becoming) more ... negative." SG5L

Time & Training

1. There was a lot of support for the May/June inservice period being a great resource for training and work time.

"Our May/June time definitely aided in the biggest possible way....the time that's set aside is what allowed us to do it, so for all we complained that we couldn't do Inservice 3, at least we had the time to do our course development" SG5L

"I think that it really did turn (faculty got engaged with the change)was the summer where I basically said, 'You know, guys, this May and June you're on off time, don't do any work, just modularize. I want you to modularize. I want you to take training. Let's focus on that. Let's really do this' -- And they'd say 'What about all the other things you always ask us to do?' and I'd say 'Forget about them.' They'd say, 'Well, what about our course outlines?' 'We're going to do them in the modularization application.' 'What about our syllabuses?' 'Well, we're going to put them in as a table in the modularization application ... 'Well, what about our... handouts?' 'Well, it's going to go into the modularization database.' 'So you're telling me that all this stuff I have to photocopy and hand out that we can put into the modularization database and the students have to print it themselves?' 'Well, yeah.' 'Oh, great, let's go modularize.'" SG3H

2. However, programs who were mandated to run three terms, with no set May/June period had a bigger challenge than most with getting the time & collaboration to implement the change. "no time for the staff as a collective to get together and work towards these ideas" PG2L. It was more the lack of ability to work together (because inservice and holiday periods are less regularized with these type of programs) than the lack of time.
3. Time to actually engage with the strategic change was limited over the term of the "project" timeline.

"You're talking about three years, but when you really look at that from an instructional perspective, you're talking probably about six, 12, 18 months, the end of April to the middle of June, that six-week period that instructors really have to learn new stuff for their craft, to update materials, and prepare for the next cycle of students coming in, and then to do a major organizational project." SG1L

"The three-year term, that was a little aggressive." SG3H

4. Some program leaders found non-traditional ways to have faculty engage with the change.

   a. "There's times when we're ... not in class and so we will take those times and talk about things that we might change or improve or whatever" SG4L
   b. "The instructors knew over this four-month period every Thursday at 1:30 I meet (with them) ... and we do modularization" SG3H
5. Training was perceived as both a barrier and a catalyst depending on whether the right training was delivered at the right time.
6. The mix of people who were in training together were both a barrier and a catalyst.
   a. Some would have preferred "workshops of faculty who are doing similar things or are in the same program or some other common organizational stream so that you actually work together and trade off your ideas" SG4L
   b. Mixed participants in the training programs was also seen as positive as it was hoped that a positive attitude and creative ideas in one program would help faculty from other programs. In fact, some program faculty saw resistance at the training sessions and that "inoculated" them to resistance to the strategic change – that is they engaged more readily.

      "I would say the negativity of some of the other programs when people would go for training or talking to people probably inoculated ours (against resistance) even further is my guess... (and since) we tend to look for opportunities here and that's our mode, ...we may have given some other people a more positive outlook on (the strategic change.) SG5L.
7. Some faculty needed very situated, one-on-one training/mentoring.

   "Full-time staff who will sit in this office and help the staff modularize, understand modularization. (The individual is) not here to do it for them essentially. (The individual is) here to educate the staff on how to do this properly," SG3H
8. Training was used to refresh faculty who didn't appear to have the skill set to engage or were passively choosing not to engage.
   "Part of that implementation process as we did the modularization is we continually retrained people because if we identified that somebody needed a little further training, we would do that, and they'd say 'well, I've taken that course already.' And we'd say 'that's okay, take it again...this time focus on these things because this is what you're missing... this time don't mark your projects. Go to the class." SG3H

Skills of Change Leaders

Change leaders' skills manifested in many ways. Skilled, wise, perceptive, sensitive... change leaders used strategies to implement and sustain the change that were very (at times) subtle and (at times) brave and (at times) bold in their implementation strategies. Lack of these qualities was seen as a barrier to successful change implementation.

1. Ability of the change leader to select those individuals who have "the ability to move forward even when you're not sure." SG4L These change leaders were able to understand that in the early stages of a strategic change implementation, we are often unsure – and yet need the courage to keep moving as we find our way through the change.
2. Change leaders who were able to contextualize the message to the particular environment/audience were a catalyst for change.
   a. "You have to because every program is going to have some uniqueness" PG2L
   b. Often, the leaders of change are the "big picture" people and "big picture" people don't have a profound understanding of the needs of the detail-oriented people. So when they try to explain change to those kinds of people, they don't have a message that makes sense to them... they don't even have the understanding of what they need – researcher interpretation of comments from SG2H
   c. Setting a standard that individuals can relate to "I'll look at it and say, if I were to hand you this module for a brand new course, would you be able to teach this course effectively? " PG2L

3. Change leaders must be able to, and have the motivation to, take the time to sort out their questions and understanding of the strategic change to be able to lead others in that change. "if you don't consult and get the help you don't really know the true message." (from SG4H interview)
4. Change leaders who knew **which strategy** to apply **when** and to **which individual** were catalysts to change.
    a. "We did it on a one by one, as-needed basis and we talked about why we were having to do this" PG2L
    b. "If you're asking somebody to own something, prepare them to own it. It's like buying a car without a driver's license. Make sure that that person has the driver's license, has had driver training, is ready and kind of excited about driving. Now give him a car and ask him to deliver an errand, and you know what? They'll do a good job of it." Refers both to skills required for the specific change (training) but also, the tools to deal with uncertainty – change hardiness.
    c. "You try to get them to think about a bunch of things. Now, if through all of that, you're not successful, then you **get a little bit more affirmative**. That's your next step -- you tend to get a little bit more affirmative because in one sense you've hired people as an expert so you can't discount what they're doing. But then you've got the things out here that you see in the environment, I'm telling them a bunch of things so I've got a broader scope than the individual instructor has so I try to manage that and the bottom line is at some point if I can't get people to come on board with that vision, I'm paid in this job to have that vision and I make the decision and if they don't like it, that's tough." SG3L
    d. Creating empowerment at the appropriate stage with faculty: "If you're thinking that you're starting to swim a little bit on this, make sure you come see me before you go under... That's your responsibility... to chase me if you need something" SG3H
    e. "I believe that if I have a difficult person, I need to make a deal with that difficult person to get the best results. And you know what? If I'm here and I'm giving you a deal and you go "look, what are you doing to for me?" You know something? Next Friday or intersession is coming up. You want to come in at noon or ... I'll help you out.... I believe that there's good in everybody. Darn rights they'll do what I ask. If I give them the chance to opt out, they will be more negative than if I get them involved the right way. I believe that." SG4H

Role Perception

1. "In this strategic change thing that's happening at LEC, buried in all this, buried in the whole thing is a real critical point, and that's the **changing role of an educator** , and it's buried in there and it's not that we don't intentionally talk about it, and every now and then it pops up. That's really what's going on right now. The role of the learner is changing and the role of the provider of learning opportunities is changing" SG2H
2. A barrier and catalyst of strategic institutional change in the study was the perception of the role of the instructor/faculty.
    a. If content is digitized, "it doesn't mean you don't need an instructor. You still need the instructor. It's just your role has changed" SG4L
    b. Some faculty changed their thinking about their role as educator.

    "He didn't even make reference to the fact that he's an instructor online. He always refers to himself as a developer... he's changed his whole way of thinking about instruction." SG2H When instructors think of themselves differently than traditional "instructor," evolving roles are less threatening
3. A barrier to engagement with the strategic change in the study was a conflict between internal institutional roles and external activities (eg. I write and publish books for profit in an external role; I'm not willing to write and publish curriculum digitally internally for no profit to me). From SG1L
4. A barrier to engagement with the strategic change in the study centered around some faculty's philosophy of teaching.

"the reason for that, is that (modules with content in) doesn't add to their (students') education. The education occurs in the classroom when they come and they interact with the other people there and they interact with the instructor and they understand the conceptual reason around the way things are done." SG3L

5. "The copyright issue, the 'that's mine' issue. 'I'm not giving it (my content) to them (administration or other faculty)' issue." SG3H
6. When program leader's viewed their role as implementing strategic change envisioned by leaders up the administrative chain of command, they had more comfort with and success with implementing the strategic change.
   a. "the organization -- if somebody has decided this (the change) is a good thing for us to do, we do work for this organization and so even if you personally disagree -- if you personally disagree so strongly then you better look for a different job. And otherwise, then get on with it, do it" SG5L
   b. "Someone has done some thinking. They put a plan in place. Why would I sit down in one day to say I'm different, I can't follow that?... I'm thinking that you guys (the project implementation team) spent a lot of hours, a lot of time putting it in place. Now, we all think that we know how to do things a little different. That's why there's a team (a project implementation team). That's why they put things (a variety of people & approaches) in (the implementation strategy)." SG4H
   c. "Somebody at LEC, somewhere in their wisdom decided that really this would be a good thing. So you go with it and it gets changed and it gets moved. It's what your employer would like you to do" SG4H
   d. "As a leader, if I wouldn't support...the idea..., it would affect my future if I was verbally against a project at LEC. If I was the Dean, I'd be wondering, what's wrong with you?" PG1H.
   e. "That's the way that my philosophy of leadership is. Right, wrong, otherwise, the leader takes the brunt. I'm the point man. If something has to happen, I'll take the heat, but I'm the first one standing in line to get you what you need to (be able to) do (work) and if you do that you don't have people debating getting their stuff done." SG4H
   f. "I think the important thing was ... that I didn't delegate the responsibility" SG3H
7. A program leader's beliefs about the primary driver(s) of activity that is in alignment with a strategic change will be motivated to be engaged – if there is no alignment, there will be a barrier to engagement.

   "What really drives our activity is student bums in seats participating the learning process, trying to make a positive contribution to the Alberta economy as we enhance those individuals' own skill levels, self-esteem," (SG1L)

Individual

1. "Individually they (faculty) have different barriers or impediments to accepting change. It might be a particular skill level they don't have. It might be that there's something else occurring in their lives and various roles that they have and they don't have the time to perhaps devote to change. So I think you really have to try and determine what the potential barrier is that might lead somebody to think oh, yeah, this is a great idea and somebody else who is presented with the very same idea, even though you may think they have the same background or coming from the same starting point, say no, that's not a good idea" SG1L
2. Individual characteristics perceived as barriers:
   a. Age
      i. The most common perception was that older faculty wouldn't engage as readily. "Individuals that were perhaps getting near their retirement decision point and who had seen many more things come and go here" SG1L
      ii. However, many found examples of older faculty who readily engaged with the change.
      "I think what you have at LEC is an aging staff in a lot of departments, people who are three to six years away from a retirement goal, a magic number, and... They're just riding the boat to shore.... But if your majority of your staff is built of people of

this nature it's very difficult to say, 'hey, by the way, we're going to do something. This is going to help us for the next ten years' and they say 'I don't really care.'... We do have some senior staff here who are a year or two away from retirement. They are just as ambitious and as keen and are as bright as our youngest staff. So certainly it's not a blanket statement, but I think that's a challenge at LEC, older managers, older faculty" SG3H

iii. Younger faculty wouldn't engage as readily. "I thought the very young new people coming into the system would always resist it because it was just one more thing to learn, and that didn't happen either." SG2H

iv. Most participants in the study who commented on age perceived that younger faculty engage with strategic change more readily than older faculty.
"A young staff are energetic because they're new. It's bright. It's different." SG3H
"The age of our staff at this point in time had a lot to do with it (our success) because we had a lot of newcomers, not people on their way out. ..Sometimes I don't know how to speak of that, but it's a bit of a reality that we know that the dynamics of a group who are four years away from retirement versus the ones who have been here four years, it is different" SG3H

b. Individual personality style -- "I think that a person's predisposition is probably pretty important." PG1H

i. detail vs big picture Some participants felt that engagement with change requires "big picture thinking which many people don't necessarily do well." SG5L

ii. excited by change vs closed to change "We all have our idiosyncrasies and it's very interesting to note, I can tell you two people for sure who will always say no right up front because that's just their automatic response to change." SG5L

iii. "union mentality" (I won't do anything more than is my prescribed job)
"Every once in awhile I think union mentality versus not, and that's sort of a workload issue because that comes uppermost in some people's minds right away and then they put the brakes on." PG1H
"And they use the tool of the union?" ES
"Yes, they put the brakes on before they even think about 'is this a good thing or not?', they just put the brakes on, and so there was a little bit of that." PG1H

c. Skill with tools of change

i. Thinking skills
"It's about individuals. I have been accused of being resistant to change, and I say accused, because I don't think that's a nice thing. Because I think I sort of like change but it's true I will have lots of questions, but I think that's normal -- that people have questions because how would you possibly want to even consider change unless you had some information. So, I think it boils down to the person." PG1H

ii. Personal management skills
"departments or **people** who are behind the eight ball and are not prepared for the day-to-day in core business and they're behind and they're not really thinking ahead and they're not really visionaries, when change starts to come into effect and they're asked to do something, all of a sudden it becomes very overwhelming" SG3H

iii. Computer skills
"The (faculty) that really were frustrated with all this computer stuff because there's a few computer-phobes. But if there really was a problem with computer literacy, then they could find the help." PG1H

iv. Time management skills
"I would say that again it's more individuals within the department, that some are just keen and get their modules done, no problem, and the next persons struggles with it and it's partly about time management and it's partly about some people like working in the modularization application and some like developing and some don't, so there's all the different struggles" PG1H

v. Ability to focus

3. Youth was seen as a catalyst to engagement with strategic change.
"The newer people took to it easier than the old (established)" PG1H

4. Educational background was seen to be a catalyst to change engagement in this study. That is, people who were seen to be "true educators" seemed to engage more readily.

   "a true educator will look at what the module is capable of doing and what its purpose is and say, yes, okay, I know what to do with this and can develop it" PG2L

   "quite easy to engage in the development of the modules are people who have some type of educational background. So either B.Ed.'s or they've been involved in adult education for awhile." PG2L

   "I thought maybe the people who had a good education, a Masters level education in educational whatever would be the easy non-resisting adopters and in some cases it was, in some cases it wasn't." SG2H
5. Previous experience with change may impact current engagement with change. But the results were quite mixed. Some participants felt that a previous negative experience with change created a likelihood an individual would not engage, but that it was affected by other variables like age, trust of the leader, ability to see a "fit" with their values, etc.

   "I think that there's probably both elements and it may depend on the personalities of the individuals that you're dealing with. Past experience with negative change initiatives may lead someone to just be down, to say "okay, flavour of the month, here we go." And to others, they might just say, "okay, I'm going to weather the storm. I'm just going to wait for it to pass." So I think it's going to vary according to the individual profile" SG1L
6. Some individuals perceived the implementation of the project as a challenge to their control of their environment and so resisted.

   "It's not in our control so we have to give it up and move on to things we can (control)." SG5L

   "Either you believe or you may not believe 100 percent, but you may as well do it, because you spend more energy fighting the stupid change than doing it and you can do it and you can learn and even if it isn't used, there's always valuable parts to it" SG4H

Culture of the Program

Question – is there such a thing as a program "culture"? is the important characteristic of a program its culture when we are examining strategic institutional change?

Culture: characteristic features of a stage or state; behaviour typical of a group or class

In my analysis, I found 28 quotations that seem to refer to, or describe a culture of a program that was a catalyst to change engagement. I found 8 that seemed to refer to, or describe a culture of a program that was a barrier to change engagement. That is a total of 36 references... I think the number alone indicate the existence of something that we would refer to as a program culture. So if we make the assumption there is such a thing as a program "culture" how do we as program leaders build a positive culture?

APPENDIX C. MODULARIZATION COMPLETION STATISTICS

LEC Modularization Completion Statistics: September 23, 2002

Department	Modules Developed (%)	Curriculum Published (%)
Health	79	42
Business	63	13
Hospitality	90	90

APPENDIX D. INVITATION TO PARTICIPATE AND CONSENT FORM

Date

Dear

I am inviting you to participate in a research project at your institution as part of my Doctorate of Educational Policy Studies program requirements. The results of this research will be used in my doctoral thesis and may provide the data for journal articles and other academic presentations. The purpose of the research is to explore your experience with the implementation of strategic institutional change. You have been selected as a potential participant because of your unique experience with change and your ability to contribute to the growing understanding of strategic institutional change.

The research project has many goals; one of which is the opportunity to help me to understand the challenges and barriers you experience in leading your colleagues to engage with strategically initiated change. Together we will explore our engagement with the demands of strategic change initiatives. This experience will contribute to our personal understanding of strategic change engagement from both a personal and an institutional perspective.

At this time, I foresee that we would meet for three hours of interviews and a retreat/focus group with some of the other participants in the research during the fall semester. I am very aware of the value of your time and will be sensitive to your commitments. My intention is to conduct interviews during your "free" time—over lunch, at a breakfast meeting, or after work hours at a mutually agreed upon location. Together we will determine the best times for the interviews and the focus group. I will be audio taping the interviews and focus group to aid me in managing the data of this study. You will be given an opportunity to validate the transcripts of the interviews as well as other products of the study. Any research assistants that I may engage to help me with this project (such as assistants to transcribe audiotapes) will comply with the University of Alberta Standards for the Protection of Human Research Participants. Please refer to http://www.ualberta.ca/~unisecr/policy/sec66.html. As well any research assistants involved in this project will sign a confidentiality agreement.

In addition to the research activities outlined above, I may be in touch with you during the subsequent analysis phase if I have questions of clarification or follow-up. To ensure that there will be no negative repercussions because of your participation, I have spoken to the Deans to make them aware of this study; I will not be communicating individual participant names to protect your anonymity. Your identity and the name of the institution will not be revealed in the dissertation or any other potential products of this study such as journal articles.

In addition to the dissertation and other academic articles and presentations, I intend to provide to the institution an executive summary of the findings of my research including recommendations for strategies to enable program leaders and institutional change agents to more effectively lead strategic change initiatives. Although much has been written about institutional change over the past two decades, very little research has been done on individual change leaders' perspectives. Since change strategies can be highly contextual, investigating leadership strategies within your institutional context will provide a valuable source of insight to institutional leaders.

Because this research is in partial completion of the requirements for a Doctorate in Educational Policy Studies, I adhere to all research protocols required by the University of Alberta's Graduate Research Ethics Review. All data will be guarded and kept secure to ensure confidentiality. I will retain all intellectual property. The attached consent form reiterates my assurances to you about confidentiality and outlines your rights including your right to withdraw from the research at any time. I will retain the original for my records and provide you with a photocopy for your records.

If you have any questions about the research, I would be delighted to provide answers. You may contact me by e-mail at Elaine.Soetaert@gov.ab.ca or at 459-3133 (home) or 427-0174 (business).

This study has been reviewed and approved by the Research Ethics Board of the Faculties of Education and Extension (EEREB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EE REB at (780) 492-3751.

Yours truly,

Elaine Soetaert

In case of any concerns or questions, please feel free to contact:

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Consent Form

This is to certify that I have read and understand the attached Letter of Invitation that outlines the research project entitled **"Understanding Institutional Strategic Change."**

I agree to participate in audio taped interviews and a reflective writing retreat/focus group. Having been contacted by the researcher, a graduate student in the Department of Education Policy Studies, I understand that:

1. The purpose of this research is to explore institutional strategic change.
2. I will be involved in up to three interviews of about one hour in duration and a retreat/focus group that could be up to four hours in length.
3. The data from this research will be used in the researcher's doctoral dissertation and other academic articles and presentations
4. The data will be used by the researcher to provide a summary of barriers and catalysts of strategic institutional change to the academic vice-president of the institution. Identities will be protected and only summary data will provided to the institution.
5. Neither participant names nor the name of the institution will be used in the resulting dissertation, paper(s), article(s), or presentation(s).
6. Data from this research will be handled with the utmost consideration of participants' right to privacy, confidentiality, and to minimize any potential harm to participants or the institution. Data will be kept in a secure location when not in use by the researcher. Data for all uses will be handled in compliance with the Standards for the Protection of Human Research Participants http://www.ualberta.ca/~unisecr/policy6/sec66.html.
7. Any information I provide to the researcher will be kept confidential and used solely for the purpose of educational research. The findings may be disseminated through publication in appropriate journals and presentation at conferences.
8. Since I am participating in this research on a purely voluntary basis, I have the right to refuse to participate at any time.
9. I have the right to withdraw at any time from the study without prejudice to pre-existing entitlements.
10. I have the right to continuing and meaningful opportunities for deciding whether or not to continue to participate.
11. Transcriptions and summaries of the data I provide will be made available to me periodically during the research for validation.
12. I have the right to any relevant information about any appearance of conflict of interest on the part of the researcher.

I have read all of the preceding documentation and I have been fully informed as to the nature of the research and my involvement in it.

(Print Name) _____ (Signature) _____ (Date) _____

In case of any concerns or questions, please feel free to contact:

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APPENDIX E. GLOSSARY OF TERMS

In this dissertation, I use the definition of the terms as they are described below. I recognize that the meaning of these terms needs to be examined whenever the terms are used as they have many connotations and shades of meaning.

Case: A case is a phenomenon that has boundaries that can be identified. These boundaries can be of time, of place, of groupings. A case can include processes, but itself is not a process. It has particularity and uniqueness. A case is a "specific, a complex, functioning thing" (Stake, 1995, p. 2).

Context: an interweaving of various webs of influence, power, structure, culture, etc. Context includes the social dimension created by individuals in groups, values, meaning-making discourses, belief systems, and relationships. Context is often used as a synonym for culture; however, context is an amalgam of structure, culture and localized variables within which agents act.

> Central to this approach (morphogenesis) is the importance of time. At any one time human agents create a particular set of social arrangements through the intended and unintended consequences of their actions. However, these consequences then form the context in which other agents then engage in further social interaction. To these agents, this context appears as relatively given, even if their actions can then change or strengthen it (Mutch, 2000, p. 157).

Culture: a term often used as a synonym for context—cultural cognitions are held with some degree of emotional investment (Sackmann, 1991).

- Includes observed behavioural regularities including language, demeanour, and rituals
- Includes values, norms, and philosophies of interaction amongst individuals in the culture
- Includes the informal "rules of the game" or "the way we do things around here."
- Is characterized by the feeling that outsiders experience in interaction with the members of the culture (Boyd, 1992).

Cultural System: the "inherited sub-set of (cultural) items to which the law of contradiction can be applied... These items are therefore propositions because only those statements that make a

claim to truth or falsity can be deemed to be in contradiction or consistent with one another" (Willmott, 2000, p. 106). "Girls are better writers than boys" is an example of a cultural system proposition.

Engagement: a heightened emotional and intellectual connection that departmental faculty members have for particular work that influences him/her to apply additional discretionary effort to the particular work. (Adapted from Gibbons, 2007, p. 3).

Faculty: teachers, instructors, professors of a post-secondary institution. For the purpose of this study, the term faculty will include department leaders because, at Leading Edge College, department leaders also have a teaching role.

Institution: complex sets of relationships that have become traditional, that are difficult to dissolve, because dissolution requires the agreement of several parties to change habitual practices. Institutions embody power and, as such, have a strong tendency to persist (Akroyd, 2004).

Loose Coupling: educational "systems in which action is underspecified, inadequately rationalized, and monitored only when deviations are extreme. The net result is that there is considerable autonomous action that unfolds independent of formal system requirements and in response to a variety of signals" (Weick, 1995, p. 134). Educational systems have entities that are more loosely coupled than other systems. In educational systems, this loose coupling is characterized by:

- situations where several means will produce the same ends
- networks are connected, yet influence is slow or weakens quickly on spreading
- lack of coordination, or dampened coordination through the system
- absence of regulations
- planned unresponsiveness
- causal independence

Morphostasis: "refers to those processes in complex system-environment exchanges that tend to preserve or maintain a system's given form, organization or state" (Buckley, 1967, p. 58).

Morphogenesis: refers "to those processes which tend to elaborate or change a system's given form, structure or state" (Buckley, 1967, p. 58).

Organization: "enduring and yet contingent outcome of collective efforts as the result of an intense activity of assemblage, boundary-making and identity-preserving which takes place at the intersection of practices and networks of interest" (Easterby-Smith, Crossan, & Nicolini, 2000, p. 791).

Reflexivity: the regular exercise of the mental ability... to consider themselves in relation to their (social) contexts and vice versa (Archer, in press). One of the "crucial features of (reflexivity is) the 'object' under consideration (must) be... bent back in a serious, deliberative sense, upon the 'subject' doing the considering" (Archer, in press).

Retroduction: is a form of inference analysis that involves moving from the specific outcome that is of interest (in this study, engagement with strategic change) to a "conception of a different kind of thing (power, mechanism) that could have generated the given phenomenon" (Lawson, 2004, p. 236).

Sensemaking: "the reciprocal process where people seek information, assign it meaning, and act" (Kezar & Eckel, 2002b; p. 314).

Strategic change: change that is broad in scope, generally initiated and supported by senior management that allows the organization to become more effective at achieving its purpose, and remain viable in its organizational field

Strategic planning: involves the process of specifying the organization's objectives, developing policies and plans to achieve these objectives, and allocating resources to implement the policies and plans.

Teleology: A philosophy that has a belief in or the perception of purposeful development toward an end. Teleological change models include strategic planning, bureaucratic and scientific management, and organizational development strategies.

Transfactual: Transfactual statements are also termed tendency statements (Steele, 2005). "A transfactual (or tendency) statement attempts to accommodate the interdependence of determining factors by recognizing that the impact of a determining factor is unlikely to be

revealed by any constant conjunction of events" (Steel, 2005, p. 147). That is the entities (in this study, causal powers) are said to be transfactual when they "exist whether or not they operate in the specific context under study... Causal powers can exist independently of empirical results" (Leca & Naccache, 2006, p. 630).

Transfactual causality: is the causation of observable events that are ontologically distinct (at a different level of reality) from the real underlying generative mechanisms (See Table 1). "Causality... is of unobservable yet (possibly) real underlying generative mechanism(s) that, when active, cause(s) observed/unobserved events" (Tezcan, 2005, p. 5